PUTFRW

MARCH 22, 2004 - VOL 36 - NO 12 - 55/COPM



Unwary users can be locked into bad outsourcing deals with fuzzy scope. high prices and no exit strategy. We've identified 12 HIDDEN TRAPS in outsourcing contracts and, more importantly, how to

avoid them. PAGE 39 iotchas

Big Four Accounting Firms Join in Cyber-Risk Effort

Create index to gauge firms' preparedness

BY JAIKUMAR VIJAYAN

A consortium of companies that includes the Big Four accounting firms and at least one large insurer is quietly working on a cybersecurity risk measurement framework for large enterprises, Computerworld has learned.

The Risk Preparedness Index is being developed by the newly formed Global Security Consortium, which so far includes Pricewaterhouse-Coopers, Ernst & Young LLP, Deloitte & Touche LLP, KPMG International and insurance giant AIG International Inc.

The RPI was originally being developed to provide a risk measurement model for use within the insurance and accounting industries. But the goal now is for the index to provide the basis for a much more broadly applicable system for measuring and rating

organizational risk preparedness, according to a source close to the GSC.

The GSC has been in active discussions with several industry groups, including The Open Group standards body. for several months in a bid to gain endorsements and wider support for the effort to build the framework.

A GSC spokesman declined to comment on the current status of that effort. But the source close to the body con-

Risk Index, page 51

Risk Preparedness Index

WHAT: A standard framework for quantitatively measuring and rating a company's cyber risk preparedness.

■ WHO: The Global Security Con-sortium, which includes the Big Four accounting firms and at least one in-surance company, are developing it.

■ WHY: Few standard tools exist for rating cycle risk proparationess follow. ■ WHEN: To be released sometime

Amtrak Lags in Implementing Security Technologies

Madrid attacks refocus attention on passenger rail system's vulnerability, lack of DHS funding

BY DAN VERTON

In the aftermath of the March Il terrorist attacks that killed 201 train passengers in Madrid, some U.S. lawmakers and IT professionals are raising questions about the lack of securi-

ty systems in place throughout the U.S. commuter rail system, particularly the federally subsidized Amtrak network.

In a letter sent to Secretary of Homeland Security Tom Ridge on March 12, Sen. Olympia J. Snowe (R-Maine) and Rep. Mike Castle (R-Del.) demanded an explanation for the imbalance between the billions of dollars in Department of Homeland Se-

curity funding earmarked for new security technologies at air and sea ports and the meager \$115 million made available to protect railroads.

"We have continued to shortchange security for our nation's rail system," Snowe

and Castle wrote in their letter. "More must be done to introduce improved security procedures and technologies to our rail system so we can

be better protected." A DHS spokesman said rail system security is primarily the responsibility of Amtrak and state and local authorities. The spokesman also acknowledged that Amtrak passengers

Amtrak, page 51

Users Lobby for MPE Support

Prod HP to release its e3000 OS source code

BY PATRICK THIBODEAU

Users of Hewlett-Packard Co.'s doomed e3000 system are pushing the company to act quickly to release its proprietary operating system source code to keep it from being frozen in time once the company cuts support at the end of 2006.

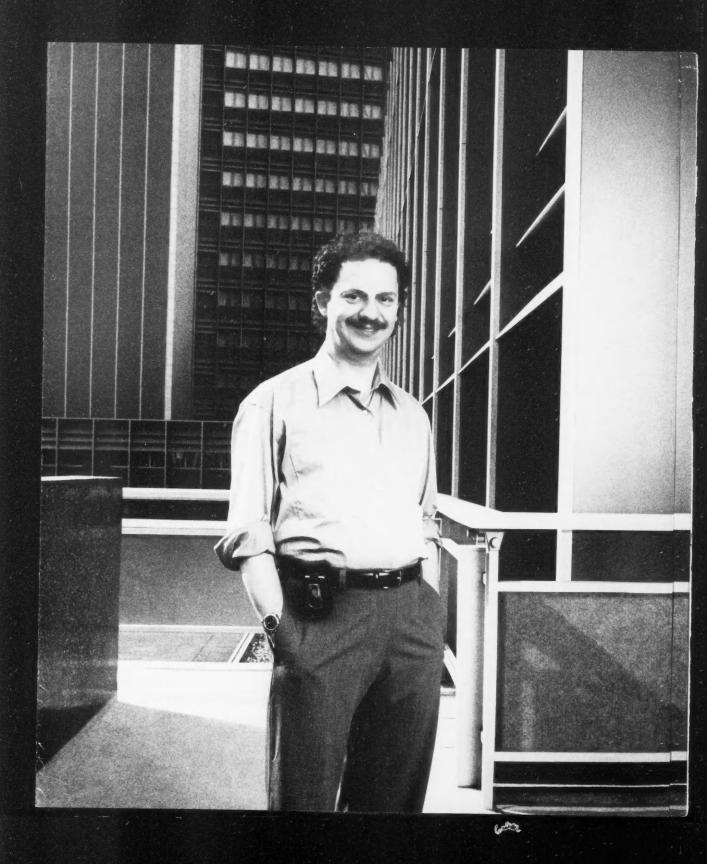
Users and independent e3000 consultants are asking HP to agree to a plan to license the MPE operating system source code this year to a third party such as OpenMPE Inc., a user advocacy group in Hagerstown, Md.

There is clearly a business case for continuing MPE's life beyond 2006," said Donna Garverick, who administers e3000 systems at Longs Drug Stores Corp., a 470-store chain based in Walnut Creek, Calif., and who is involved with OpenMPE. "You are going to have customers, some of notable size, who will still be running MPE, and having an organization to support MPE is important."

Even though the deadline to HP e3000, page 16

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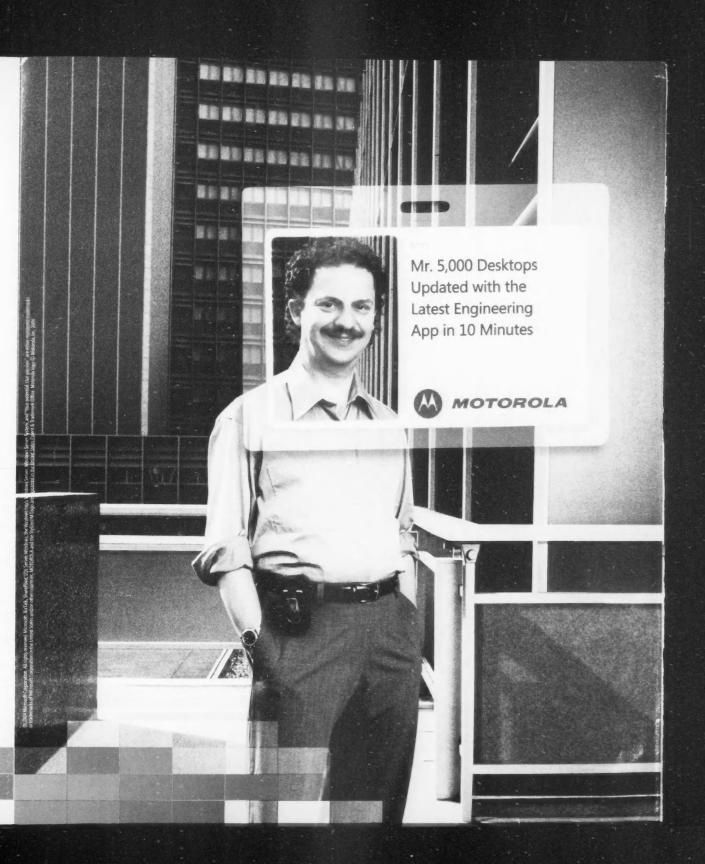


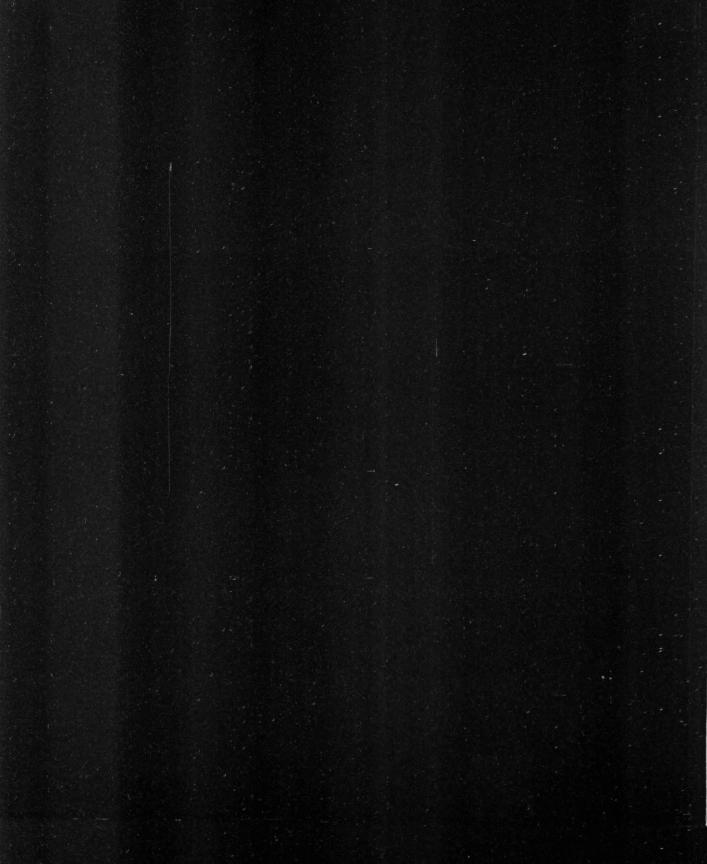


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Blueprint for Code Automation

In this week's Technology section: Some companies are adopting the Model Driven Architecture approach to building applications to achieve benefits such as automatic code generation, reductions in development time and costs, and improvements in code quality. Page 25

03.22.04

Play War!

In the Management section: War games can make strategic planning come to life and help companies simulate business moves such as making strategic IT investments — as well as competitors' countermoves. Page 42

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ONLINE

Foiling a Hacker's Delight

MOBILE/WIRELESS: How to implement an indepth defense to protect the corporate network against threats associated with remote and mobile workers. **O QuickLink 45354

Cache or Carry?

STORAGE: Companies that need to consolidate their data over WANs can choose between file-caching technologies and WAN optimization, writes Val Golan of Golan Consulting. © QuickLink 45361

Avoid the Career Doom Loop

CAREERS: If you don't constantly demonstrate your value to your company, people will forget what you're doing and why you're there. To avoid the doom loop at work, take personal responsibility to ensure that you're always adding value. O QuickLink 45178

'Trusted' Digital Insider Theft

SECURITY: When credit card numbers, customer records or source code are lifted from your company in broad daylight, that's extrusion. IT veteran Danny Lieberman suggests where to look for potential sources of extrusion at your company. Quicklink 45044

Web-based Mail and Security

SECURITY: Many companies are skittish about Web mail because of security concerns. Consultant Keith Pasley takes a look at options for deploying secure Web mail at your company. **O QuickLink 45181**

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QuickLink a2570

The Online Store

QuickLink a2420

Microsoft, European Officials End Talks

Antitrust settlement talks between Microsoft Corp. and the **European Commission broke** down last Thursday, and European competition officials this week plan to ask the commission to rule that Microsoft has abused its desktop operating system monopoly. The regulators will also propose a series of restrictions on Microsoft's future business conduct. The software vendor said it will appeal the expected decision.

3Com Reports Loss

3Com Corp. in Santa Clara, Calif... reported that it remained in the red during its third quarter and that revenue fell 21% year over year. The company said it expects fourth-quarter revenue to be similar to the total from the third quarter, which ended Feb. 27.

	REVENUE	PROFIT
Q3 FY04	\$171.8M	(\$85.6M)
Q3 FY03	\$216.5M	(\$79.2M)

SEC Fines Lucent

Lucent Technologies Inc. said it will pay a \$25 million fine to the **U.S. Securities and Exchange** Commission as part of a deal signed early last year to settle an accounting investigation. Lucent initially wasn't fined, but the company said the SEC's staff has decided that it should be penalized for a lack of cooperation during the investigation. Murray Hill. N.J.-based Lucent added that it doesn't plan to contest the fine.

Short Takes

Dallas-based in TECHNOLOGIES INC. said it plans to lay off an undetermined number of workers as part of a restructuring aimed at reducing operating expenses by about 10%.... IBM said it was tapped by the U.S. DEPARTMENT OF DEFENSE to help develop policies for the use of RFID devices by military suppliers.

PeopleSoft Updates World Green-Screen Applications

Adds Web interface to I.D. Edwards line

BY MARC I SONGINI

cations that the

N A MOVE AIMED at keeping a large part of its expanded installed base happy, PeopleSoft Inc. is **ALL ABOUT APPS** rolling out a re-Visit our ERP/Supply Chain fresh of the World Knowledge Center green-screen appli-QuickLink k2000

software vendor inherited when it bought I.D. Edwards & Co. last summer.

PeopleSoft last week announced a Web-based user interface and various other new features for the World line, which is still used by nearly half of J.D. Edwards' 6,700 customers. The upgrade follows the launch last fall of a pro-World lobbying campaign by a group of users who said they didn't want the software to be treated as a cash cow while PeopleSoft tried to migrate them to its other applications (OuickLink 423161,

Positive Response

"We're pleased PeopleSoft has brought some new vigor into the World line," said James Berlekamp, applications manager at tableware maker Libbey Inc in Toledo Ohio Libbey runs a suite of World software, including the human resources and payroll modules. Berlekamp noted that J.D. Edwards had allowed the World line to wane, forcing Libbey to write some of its own bug fixes and functionality enhancements.

The Web-based user in terface could help the company cut down on software administration costs, he said, adding that he hopes PeopleSoft will consider additional improvements to make World's warehouse and inventory management software run more efficiently.

The new user interface was the most requested feature, said Dave Siebert, general manager of the World product line. It will be available at the end of this month. PeopleSoft is also adding about 250 other enhancements, mostly focused

on ease of use and regulatory compliance. For example, tighter integration will let users feed sales order information directly

into World's manufacturing and distribution management software Siebert said.

"This is a boost [for World]." he said. "We've been able to, as part of PeopleSoft, get more resources and been able to add more people to development."

"Any movement in this space is appreciated," said Gary Riley, a systems analyst at Matanuska Telephone Association Inc. in Palmer, Alaska, and a member of the Quest user group for J.D. Edwards customers. Riley said he's interested in the Web user interface and the tighter integration between the distribution and sales order applications.

World runs only on IBM's iSeries servers (formerly the AS/400 line), while the newer, midmarket-oriented EnterpriseOne software that People-Soft got from J.D. Edwards supports multiple hardware platforms. PeopleSoft also announced an upgraded version

NEW FEATURES

EnterpriseOne 8.10

- A real estate management application that streamlines the tracking of leases, budgets and other property-related data
- A financial management tool for creating multivear forecasts to help reduce business risks
- Asset life-cycle management software to automate the process of ensuring that equipment is used efficiently

of the EnterpriseOne applications last week (see box).

John Matelski, deputy CIO for the city of Orlando, isn't a World user. But after conducting an informal survey of 10 World customers, Matelski, who is a member of Quest's board, said "the overriding sentiment . . . seems to be that they're pleased that longawaited progress is finally being made." O 45589

EDS Product Life-Cycle Management Unit Sold

BY JAIKUMAR VIJAYAN

Users of UGS PLM Solutions software can expect to see the company partner with more global systems integrators and service providers, a UGS official said last week in the wake of its sale by parent Electronic Data Systems Corp.

The sale is also unlikely to cause any disruptions for customers of UGS's product lifecycle management software. the executive added.

EDS last week announced the sale of its UGS PLM subsidiary to three private equity firms in a transaction valued at \$2.05 billion. Under the deal, Bain Capital LLC in Boston. Silver Lake Partners LLC in Menlo Park, Calif., and Warburg Pincus LLC in New York will each hold an equal investment in UGS.

Being cut loose from EDS will allow UGS PLM to attract more services partners that might otherwise have staved away, said Robert M. Nierman, executive vice president of business strategy at UGS.

"Being part of EDS made it difficult for us to entertain serious discussion about global partnerships," he said. "This opens the door for stronger partnerships, though EDS will remain a key partner for us."

Being independent will give UGS the "ability to act more like a software company" instead of the more services-led business it had become as an EDS subsidiary, said Ed Miller, an analyst at CIMdata Inc. in Ann Arhor Mich

"In the near term, they need to reinforce to their customers that their direction is consis-

PLM Portfolio

UGS PLM sells the following products:

- Teamcenter: Com PLM suite
- u Unigraphics NX; 3-D product engineering software
- I-deas: Integrated CAD/CAM/CAE product
- E-factory: Preproduction information management

tent with what they have been saying" prior to the sale, Miller said. The UGS business, with nearly \$900 million in revenue, was a profitable one for EDS. But it will need to work on raising its market visibility after having a relatively low profile as an EDS unit, Miller added.

"Everyone we have talked to from the EDS side has assured us that this is going to be completely transparent," said John Loo, senior manager of technical computing at a Californiabased sporting goods company that is a longtime user of UGS PLM products. Loo requested that his company not be named.

EDS's sale of its UGS PLM subsidiary comes at a time when the PLM industry looks poised to grow, said Andrew Balson, managing director at Bain Capital. After years of slow growth, the market for product life-cycle management software has reached an "inflection point," Balson said.

"We think the technology today is mature enough and the customers are mature enough that we are going to see very significant growth," he said. O 45592

Users Want Microsoft to Feel Patch Management Urgency

New Windows Update Services gets eager looks

BY CAROL SLIWA LAS VEGAS

Users of Microsoft Corp.'s management products showed keener interest in short-term deliverables than in the long-term strategic initiatives that the company outlined here last week at its annual management conference.

They packed sessions on Systems Management Server (SMS) 2003 and the newly renamed Windows Update Services, formerly called Software Update Services (SUS).

Although the acronym for the new edition — WUS — drew chuckles, attendees expressed serious interest in the free service that can help them patch not only Windows but also Office 2003 and XP, SQL Server and Exchange Server. The ability to update other Microsoft products will be added later this year, said Steve Anderson, a director of

Windows server marketing.

In contrast to SUS, the new version will also let users target individual computers or groups of computers, get basic reports about which computers have been patched, and download only patch bits that represent changes to the system, Anderson added.

However, the delayed availability of WUS was a letdown for some attendees. CEO Steve Ballmer pledged last October that the patch management services would be available in the first half of this year, but Microsoft officials last week said they won't be ready until the second half. A limited beta was released last week to about 200 customers, according to a Microsoft spokeswoman.

"I was a little disappointed," said Scott Sikes, manager of open systems operations at Compass Bank in Birmingham, Ala. "We wanted to look at it because we're also looking at several third-party products. Patch management is a pretty big issue, especially in the financial readm".

Two products that are on track to ship in the second half of this year as originally planned are Microsoft Operations Manager (MOM) 2005 and System Center 2005. The products were tagged 2005 because Microsoft plans to adopt a new naming convention, labeling offerings due in the second half with the subsequent year's date, according to Bob Muglia, senior vice president of the Windows Server division.

Weighing the Need

System Center 2005 is an integrated management suite that includes SMS, MOM and a new common reporting system. Microsoft last week also unveiled new details about the second version of System Center, including a wizards-based capacity-planning tool codenamed Indy.

Although several users at companies that already operate both SMS and MOM said they're intrigued by the new capabilities, some from larger companies said they don't think they will have reason to seek

Microsoft Management Update

WINDOWS UPDATE SERVICES: The renamed new edition of Software Update Services, for patch and software update management; the beta was released last week. If can now be used for SQL Server, Exchange Server, Office 2003 and Office XP, in addition to Windows.

SYSTEM CENTER 2005: A private beta was released last week; the integrated management suite will include Systems Management Server 2003, MOM 2005 and a new common reporting engine.

SYSTEM DEFINITION MODEL (SDM): The first design preview of the XML-based application manifest was unveiled to 150 partners and large customers for feedback; SDM is core piece of Microsoft's Dynamic Systems Initiative.

MICROSOFT OPERATIONS MANAGER (MCM) 2005: Formerly known as MOM 2004; it bets was released last week. New features include wizard-based installation, a task-based user interface and visual of display of servers and applications. A beta of the lower-cost MOM 2005 Express was also released.

MOM MANAGEMENT PACKS: They were released from Siebel Systems, Veritas and Hitachi, in addition to Microsoft connectors for IBM Tivoli and HP OpenView.

SYSTEMS MANAGEMENT SERVER 2003 FEATURE PACKS: Beta versions were released last week of packs for managing devices running Windows CE, Windows Mobile-based Pocket PC and Smartphone software.

out the new, integrated product.

"Unless we undergo some sort of change in products, I don't see it coming into our organization," said Clark Ardern, a technical director at CNA Insurance in Chicago. He noted that CNA uses operations management products from NetIQ Corp. and Hewlett-Packard Co. rather than MOM.

The long-term vision for System Center is far more ambitious than the initial version due out this year. Version 2 will support the XML-based System Definition Model (SDM), which is intended to help developers, operations managers and users better communicate about application resources and requirements.

A design preview of SDM, which is a core piece of Microsoft's Dynamic Systems Initiative (DSI), was unveiled earlier this month to a select group of partners and large customers. SDM is expected to be released in the first half of next year along with Visual Studio 2005, and it will later be supported in the second version of System Center, which is due no sooner than 2006, according to Muglia.

But the full DSI vision isn't expected to be realized for several years, and some users said that even though aspects of it look interesting, it's too far off for them to give it serious attention.

Rick Derks, director of information services at Farm Credit Services of Missouri in Jefferson City, said DSI represents "a whole different way of doing things," not just a new software and hardware infrastructure. He said it will require organizational change and the education of developers, managers and users about the tools supporting SDM. © 45583

Muglia: No Longhorn Before 2006

LAS VEGAS

Microsoft executives have been fuzzy on the expected ship date for the next major version of Windows, and they have raised the possibility of newly packaged editions of the current client and server versions.

Bob Muglia, senior vice president of Microsoft's Windows Server division, last week discussed the company's options for Windows and its upcoming management offerings.

Is there going to be a Release 2 of Windows Server 2003?

There's a set of innovations that have been under development. We want to get those into customers'

hands. Exactly the vehicle we're going to do that, we're still working on the specifics.

When is the next major Windows release, codenamed Longhorn, com-

named Longhorn, coming? 2006 is the earliest time frame we're looking at.

and server will ship at different times? They will almost always ship at different times in the future. Clients need slightly less bake time than servers do.

Is 2006 applicable to the Longhorn client and server? I can't speak as much for the client pieces. Some analysts talk about Longhorn server arriving in 2007. Is that likely? It's too early to say for sure

ls it possible that Longhorn features will turn up in Release 2 of Windows Server 2003? There

are three major pillars for Longhom. One is the new user interface pieces in the Avalon UI, the graphical UI. Another is WinFS [storage]. And the third is the Web services infrastructure in Indigo. . . . At this point, it doesn't look like any of those things could possibly ship any earlier.

Windows Update Services was due in the first half of this year. Now it's expected in the second half. What happened? We started looking at the features that our customers needed to get these

patches rolled out effectively, and frankly, we've added functionality to Windows Update Services over the last six months. For example, we added the ability to install patches at the time a user shuts down a system.

Last year, Microsoft officials said Version 2 of System Center would be ready in 2005. Is that still the case? We'll be in beta for sure in 2005.

Is it likely to be ready in 2006 then? I think it is likely 2006.

- Carol Sliwa

MORE ONLINE

Head to our Web site for the full Muglia interview:







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Visual Studio .NET 2003 can cut development time by two-thirds, giving you more time to think.

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BRIEFS

Sun Execs Detail Software Plans

Sun Microsystems Inc. plans to ship a version of its Java Enterprise System software for Red Hat Linux within 60 days and add Windows and HP-UX releases by year's end. Executives said Sun will also detail a road map for identity management tools in the next 60 days. [For more details, go online: QuickLink 45507].

Nortel Places CFO, Controller on Leave

Nortel Networks Ltd. said it has put its chief financial officer and controller on paid leaves of absence while an audit committee reviews the company's financial results for last year. The leaves of absence were initiated one week after Nortel disclosed that it likely will have to revise the 2003 results.

Veritas to Restate

Veritas Software Corp. said it will restate its financial results for 2001 and 2002 after an internal investigation showed shortcomings in its accounting practices for those years. Veritas will also revise its results for last year.

MARK HALL . ON THE MARK

Server Load Balancers Obsolete in ...

...less than two years. **That's the prediction** of Craig Stouffer, marketing vice president at Redline Networks Inc., who claims that multifunction appliances are clearing out the clutter of "Web tier front-end systems." Stouffer says that his Campbell, Calif.-based company's release

on March 31 of the Redline E|X Version 3.3 all but puts the nail in the coffin of single-minded load balancers for large-scale Web operations. Not unlike the folks at Santa Clara, Calif--based NetScaler Inc. mentioned here last week [QuickLink 45413], Redline is packing SSL acceleration, HTTP security, authentication and authorization features into its box along with caching, connection management and server load balancing. The new release also adds self-healing mesh technology to a rack of up to 64 of these appliances

so no site visitor ever loses his place online, even in the midst of entering data on a page. If a Redline box crashes in the middle of a transaction, another slips in to complete the deal. The 3.3 upgrade is free to existing users. While on the subject of free, bookmark www.globalspec. com, a great technology information site. Run by GlobalSpec Inc. in Troy, N.Y., the site caters to the engineering-oriented looking for details on all manner of tech gear. It maintains catalog data from 10,000 high-tech firms in its database, which you can search for free. On Thursday, the company will add The Engineering Web to its information motherlode. It indexes 100,000 technology Web sites containing 20 million pages of mind-numbing data that you can't live without. CEO Jeff Killeen says that technologists get frustrated by searching online with general-purpose search engines. "When you do a search on gyros, you don't want to see informa-

tion on sandwich shops," he quips. (Of course, that would depend on how hungry you are.) Unlike Google and other search companies that take money from vendors to place their information at the top of search results, GlobalSpec lists its discoveries in alphabetical order. "We couldn't think of a fairer way," Killeen says. Fair enough. . Need a new hobby? How about spam revenge? That's one of the

side benefits behind the release of the antispam tool Spamfire 1.5 for the client, with a server version due by summer and a hosted Spamfire option ready next month. Michael Herrick, CEO of Matterform Media Inc. in Espanola, N.M., said Spamfire can send an untraceable response to spammers, pestering them with a nonsense message every 10 seconds. The software also includes the spam crime reporter feature that manages your endless unsubscribe clicks and tracks down spammers that have illegally ignored your request. As Herrick puts it, "The CAN-SPAM Act actually legitimizes spam," but you can at least use the one tough provision of the legislation, the legal muscle now behind unsubscribe compliance, and get more than simple revenge. You might get some lawsuit money as well. Once hackers steal passwords they can get to sensitive data on your systems from any PC in the world. For now. Later this year expect to see PC suppliers that use core system technology from Phoenix Technologies Ltd. in Milpitas, Calif., preload their computers with Trust Connector, which encrypts a unique and changing key into the system's read-only memory. Servers can request the key from the PC or laptop to ensure that not only is the password acceptable, but the machine is, too. Ektron Inc. in Amherst, N.H., is well under way turning its content management software into a top-to-bottom .Net application. The CMS400.Net product will be ready by June, says CEO Bill Rogers. He says going all .Net makes the application more secure since you can define the rights of all .Net code, COM objects. on the other hand, can run amok on a server if accessed by hackers or malcontents. Q 45582

Smooth as Silk

If your Citrix MetaFrame or Oracle Forms applications are running roughly, consider Silk/Performer 6.5. The nonintrusive testing tool will add those environments to its capabilities when the upgrade ships this week from Segue Software Inc. in Lexington, Mass. Not only do you get load tests for performance but also you'll have real-time app monitoring, Pricing starts at \$30,000.

Computerworld's Maryfran Johnson Recognized for Editorial Courage

NEW YORK

Computerworld editor in chief Maryfran Johnson last week was honored with a national business journalism award in recognition of her steadfast adherence to the "goal of placing readers first and maintaining independent, honest, and ethical journalism."

The Timothy White Award was presented to Johnson at an American Business Media luncheon here. Johnson was the first recipient of the prestigious award, which made its debut at the 50th Annual Neal Awards ceremony held to recognize excellence in business journalism.

The award was named for the longtime editor of *Bill-board* magazine who was considered the conscience of that publication and who succumbed to a heart attack in June 2002. It was presented to Johnson by White's widow, Judith Garlan White.

The award cited several demonstrations of Johnson's

courage and integrity, including a June 2001 editorial on Oracle Corp.'s decision to cancel a large amount of advertising after Computerworld published a series of articles on Oracle's unpopular pricing policies [QuickLink 21296]. Also cited was an October 2003 editorial titled "Ethics and Influence." In it Johnson, prompted by a Computerworld story on ethical questions raised by Microsoft Corp.'s sponsorship of a Forrester Research Inc. report, drew attention to the role played by the media itself and its "spotty record in asking enough of the right questions about the pedigree of the research we report on" [QuickLink 42153].

"Upholding the editorial integrity of the work Computerworld does is already a privi-

lege for me, as is leading the outstanding group of journalists we have here." Johnson said. "This award is a great honor for us all, but it's also a wonderful reminder of how important it is to keep our readers foremost in everything



CW'S MARYFRAN JOHNSON won the Timothy White Award

"This is testimony to our editorial mission to be the voice of IT management." said Bob Carrigan, CEO of Computerworld Inc. "We want to be the most trusted source for IT management, and it's gratifying that such a prestigious organization feels that our edi-

torial leader stands above all others in terms of trust and integrity in journalism."

Also at the Neal Awards ceremony, Computerworld was honored as a finalist in the category "Best single issue of a newspaper/news tabloid" for its July 7. 2003, issue. **Q 45605**



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Network Associates

Linux Push Breathes New Life Into Novell for Some IT Execs

Users give NetWare another chance; product integration moves on tap

BY MATT HAMBLEN

ITENDEES AT Novell Inc.'s BrainShare conference this week will hear more product announcements related to the company's Linux strategy, but the bigger news may be the smiling faces of Novell officials and many users.

The reason: After suffering through a protracted period of decline, Novell and its flagship NetWare technology have acquired new life following the company's purchases of Linux software vendors Ximian Inc. and SUSE Linux AG, several users and analysts said.

In fact, some users who previously had bad impressions of Novell are now buying its products because of its Linuxoriented strategy, said James Taylor, a consultant at The East Cobb Group Inc. in Marietta, Ga. For example, Taylor said, a medical device maker that he wouldn't name is installing six NetWare-based servers for file and print functions, plus six Linux servers that are running NetWare services under the open-source operating system.

Boscov's Department Store LLC in Reading, Pa., gave up on NetWare several years ago, said Joe Poole, manager of technical support at the 40-store retail chain. But he and other IT managers at Boscov's met with a Novell salesman last week to discuss, among other things, the possible use of Linux on its 1,200 desktops.

"We did write Novell off with NetWare," Poole said, noting that Boscov's primarily migrated to Windows-based servers. "But I'm more excited about SUSE than ever before because of Novell's purchase of them." He added, though, that SUSE users may have to pay higher prices to Novell.

A spokesman for Novell wouldn't disclose details about product announcements due to be made at BrainShare, which is being held in Salt Lake City. But he said Novell plans to highlight "synergies between the products of companies" it has acquired.

Taylor said he expects Novell to announce that it has integrated its ZENworks management software with Ximian's Red Carpet Enterprise tools to offer improved management of Linux PCs, a pairing that several users are also anticipating.

Earl Perkins, an analyst at

Meta Group Inc., said users should also expect products that bring together pieces of the technology Novell has acquired with its security, identiymanagement and Web application development software.

More centrally, however, Novell's Linux drive has refocused the company and revitalized its core NetWare services as a companion to SUSE
Linux, Perkins said. "This
gives promise to anybody who
wants to listen that there is an
operating system on par with
Microsoft for Linux," he
added. "I see a lot of spring in
the step at Novell."

Still, some users will have pointed questions for Novell executives at BrainShare. For example, George Raetzke, a senior systems programmer at Northern Illinois University (NIU) in DeKalb, said he wants to know "exactly what are the pluses and minuses of running different NetWare services on the NetWare or the Linux kernel. Of course, that's politically a hard thing for them to answer."

Raetzke wants to be able to justify moving NIU's NetWare services to Linux but can't if we have to spend hundreds of man-hours to get something that provides only a 3% improvement in performance."

Buying SUSE "was definitely a good direction" for Novell to take, said Brad Staupp, a senior support analyst at John-

NEW SOFTWARE

Novell announced these products at last week's CeBiT show in Germany:

= SUSE Linux 9.1 Personal and Professional editions, both based on the Linux 2.6 kernel. Priced at \$29.95 and \$95.95, respectively.

■ GroupWise 6.5, an upgrade of Novell's end-user collaboration software that will run on Linux separately from NetWare. No charge for existing Group-Wise users.

= ZENworks Patch Management, an add-on to ZENworks systems management software. Priced at \$18 per device.

son County Community College in Overland Park, Kan. He added that he's worried about centralized desktop management, but he hopes that will be addressed by the expected integration of ZENworks and Red Carpet. • 45596

Users Look to Cut Storage CPU Utilization With Network Cards

TOEs installed to reduce TCP/IP processing loads

BY LUCAS MEARIAN

Network interface cards that can open up more bandwidth for transporting data between storage devices and application servers are making inroads with corporate users, as prices fall and the Internet SCSI protocol catches on.

Users and analysts said prices for the TCP/IP offload engines, or TOEs, have fallen below \$500 in some cases, down from about \$1,000 when they emerged two years ago.

Some IT managers said they're waiting for broader adoption of the iSCSI data transport protocol before installing TOEs on high-end servers. But using the cards on smaller systems makes sense at current prices, they added.

Mike MacNeill, director of technical operations at Cross Country Healthcare Inc. in Boca Raton, Fla., said he's using six ISCSI TOEs made by Adaptec Corp. to cut the CPU utilization on his Microsoft Exchange e-mail and Oracle database servers by up to 15%.

The systems are backed up to two Network Appliance Inc. file servers over an iSCSIbased storage-area network, which MacNeill said he chose because it's five times less expensive than a Fibre Channel

TCP/IP Offload Engines

 Typically cost about one quarter the price of Fibre Channel host bus adapters

■ Use Ethernet networks to transport block-level data

■ Can offload up to 60% of TCP/IP-related processing from an application server's CPU

■ Support encryption technologies, such as the IPSec protocol

SAN and far less complex.

"The only reason we're buying TOE cards is because of
iSCSI," MacNeill said. The
amount of data that the health
care staffing firm needs to
store on its SAN is growing
rapidly. "Especially with Sarbanes-Oxley driving [e-mail
retention], we expect to hit
close to 10TB of capacity by
the end of this year." he said.

Tony Asaro, an analyst at Enterprise Storage Group Inc. in Milford, Mass., said the combination of iSCSI and TOEs is becoming more widely deployed. Asaro said he knows of more than 300 iSCSI SANs in production use, although he didn't have any statistics on TOE adoption.

Alacritech Inc. in San Jose this month released a TOE that uses Microsoft Corp.'s iSCSI driver and has a list price of \$599. Intel Corp. and Adaptee in Milpitas, Calif. released similar products last year at prices ranging from \$400 to \$600.

Analysts said TOE technology should receive another boost when Microsoft ships a native software driver that will provide a standard interface between the devices and server versions of Windows. But that's not imminent. Microsoft said the TOE architecture is due for delivery at about the same time as the Longhorn version of Windows, now expected in 2006 (see story, page 5).

Joseph Meier, chief technology officer at Stargate Digital in South Pasadena, Calif., is using Alacritech TOEs on I6 of his file servers with direct-attached storage in an effort to reduce CPU utilization by up to 60% while transmitting video streams to TV networks.

The visual-effects company moves a large number of highresolution video frames, Meier said. "Consequently, our servers were spending a lot of time doing TCP/IP housecleaning."

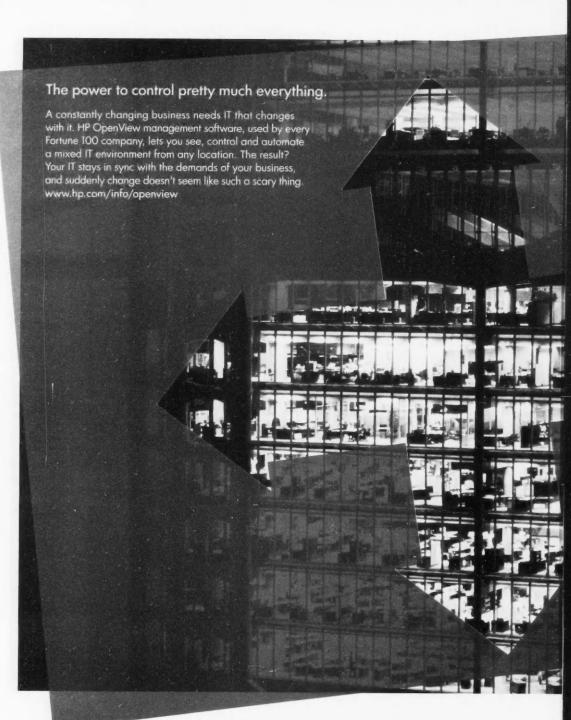
Meier said the TOEs have generated a return on investment by eliminating the need to install a Fibre Channel SAN. "So far, they've proven their utility." he said. © 45398



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more than \$8 billion. "Just when money becomes available, why throw it at something industrywide, boring

and that doesn't create a competitive advantage?" Iati said.

Even the SIA isn't pushing hard for adoption of T+I set-

tlements. Two years ago, the

trade group rescinded a mid-

2005 deadline it had set for the

industry to move to

T+1 in favor of pro-

moting STP, which

involves creating

networks that let

data flow from bro-

interconnected

IBM Sets Target of 40,000 Linux PCs

IBM hopes to have 40,000 internal desktop Linux users by year's end as part of a push to install the open-source operating system on its client devices [QuickLink 441211, said Scott Handy, IBM's vice president of worldwide Linux strategy. But some users may not save money by switching to Linux PCs, Handy added while speaking at the Open Source Business Conference in San Francisco.

European Officials List Oracle Concerns

The European Commission confirmed that it has sent Oracle Corp. a statement of objections about the company's proposed takeover of PeopleSoft Inc. The statement, a normal part of merger reviews by the commission. lists reasons why the hostile bid could harm software competition in Europe. Oracle said it was "pleased to have clarity on what the commission's key issues are."

Microsoft Aims to Localize XP. Office

Microsoft Corp. said it plans to work with government bodies in various countries to make Windows XP and Office Standard Edition 2003 available in more languages. The company will offer Language Interface Packs that can be installed on top of the two products to provide localized language support. Microsoft said it hopes to double the number of supported languages, to about 80.

Short Takes

AFFILIATED COMPUTER SERVICES INC. in Dallas said it has signed a 10-year deal to manage some of the IT systems and business operations at General Electric Co.'s shared financial service center in Fort Myers, Fla. . . . SAP AG plans to start reselling the Crystal Enterprise reporting tools as part of a deal with Business Objects SA.

SEC Considers Rules For Trade Automation

Seeks feedback on straight-through processing, faster settlement cycles

THE U.S. Securities and Exchange Commission is weighing the idea of mandating that financial services firms shorten their stock-trade confirmation and settlement cycles and fully automate exchanges of settlement data.

The SEC on March II issued a letter seeking comments on a variety of proposals for improving the security and efficiency of the trade settlement system and helping companies do straight-through processing (STP) of trades with one another.

In a statement last week. John Panchery, managing director of systems and technology at the Securities Industry Association in New York, lauded the SEC's effort "to streamline the pipeline used for handling securities transactions."

However, SIA spokeswoman

Margaret Draper acknowledged that it would be a challenge to get financial management firms to spend money on STP technology when a return on investment may not be as obvious for them as it is for the investment banks that sell stocks. "But we're working with the buy side," Draper said. "It'll be a more efficient process all around."

The SEC's proposals include creating a new rule requiring brokerages to complete the trade confirmation and affirmation process on the date a trade takes place, or T+0. In addition, the SEC said it's seeking feedback on reducing the settlement cycle from the current three days to one, or T+1. The commission originally said it might create new rules mandating the use of STP

Link 299501.

simple: Brokers don't want to do industry projects," said TowerGroup Get additional coverage of the analyst Robert Iati, referring to IT investments that are widespread and

don't offer any differentiation.

Needham, Mass.-based TowerGroup estimates that achieving T+1 would cost the financial services industry

"This kind of thing is going to generate push-back. It's real

MORE ONLINE

financial services industry O QuickLink g3670 www.computerworld.com

kers and dealers to the back-end systems of banks, brokerages and clearinghouses. Currently, many brokerages still use fax machines and phones to handle that process.

Boston-based Omgeo LLC offers a trade-matching service that acts as a central hub and manages the electronic handshakes between systems at different companies. Lee Cutrone, managing director of industry relations at Omgeo, said he sees the SEC's move as "a very positive thing" because it refocuses the industry's attention on STP.

"There were some folks who were saving, 'OK, there's no date, so let's back-burner this," said Cutrone. O 45588



Cisco Expands Switch Line, **Supports 10 Gigabit Ethernet**

BY MATT HAMBLEN

Cisco Systems Inc. last week announced a series of additions to its Catalyst switch line, including devices with 10 Gigabit Ethernet capabilities.

For example, a new Catalyst 3750 edge switch with a 10 Gigabit Ethernet uplink port is due for release late this month at a starting price of \$20,000. Cisco also introduced two 10 Gigabit Ethernet modules, one for use with copper cables in data centers at distances of up to 15 meters for clustering servers and other IT equipment. The other module supports multimode fiber installations covering distances of up to 300 meters, Cisco said. The

two products are priced at \$600 and \$4,000, respectively.

McGill University in Montreal has been beta-testing 20 Catalyst 3750s with the 10 Gigabit Ethernet uplink capability for the past two months, said Quan Nguyen, associate director of systems engineer-

OTHER ANNOUNCEMENTS

CATALYST 6500: Upgraded supervisor engine, plus a 4H port Gigabit Ethernet module and soft ware updates supporting content switching, SSL, IPser-VPNs and

CATALYST 4500 4510R chassis with 10 slots, plus a new Supervisor

ing at the school. McGill is trying to expand the amount of available bandwidth between its music performance venues and recording studios. so student recording engineers can take live video and audio streams from the performance halls via IP and mix them, Nguyen said.

"We're doing high-end audio and video research," he said. "We keep pushing more bandwidth to the music department, but they keep asking for more." Nguyen noted that the school uses a total of about 700 Cisco switches and sees no need to consider alternative vendors.

High costs have been a major factor in slowing the adoption of 10 Gigabit Ethernet technology, said Zeus Kerravala, an analyst at The Yankee Group in Boston. But the situation is changing as prices fall, he said, adding that 10 Gigabit Ethernet now "is going into the general enterprise, not just academic settings.'

Health Net Inc. recently deploved new network analysis software modules that Cisco also announced last week for its Catalyst 6500 switch line (see chart). HealthNet is using the software on six Catalyst 6500s to do remote troubleshooting and analysis of voiceover-IP services, said leff Jacobs, a senior network design engineer who works at the company's data center in Sacramento.

The network analysis software "has solved a lot of different requirements, since it didn't require new management tools or rack space or much of a learning curve," Jacobs said. O 45591

Users Cite Promise, Perils of CRM Apps

Higher sales are among the potential benefits, but usage issues can be vexing

BY MARC L. SONGINI

Despite lingering skepticism about the effectiveness of CRM applications, some users last week said the software can provide payoffs such as higher sales, improved efficiency and increased customer satisfaction - if it's used in the right way.

That was the catch cited at Gartner Inc.'s Spring CRM Summit here by a half-dozen IT managers and other attendees whose companies are currently in varying stages of CRM rollouts.

Scot Struminger, vice president of IT for corporate headquarters systems at FedEx Corp., said one of the keys to success on an installation of Amdocs Ltd.'s ClarifyCRM call center applications was close cooperation between the package-delivery company's IT staff and business managers.

For example, prior to the CRM project, FedEx aggregated transactions with corporate customers at the overall account level. But Struminger said that when IT workers began talking to prospective end users about the new software, they realized that the company's definition of customer had to be changed. "You had to capture interaction at the individual level," he said.

Drop in Call Volume

FedEx went live with Clarify-CRM at its Memphis call center in 2001 and now has about 3,000 workers using the applications. By using the Amdocs software to push customers to the company's Web site, and thus resolve problems more quickly and reduce the need for follow-up phone calls, FedEx has cut its daily total number of incoming calls by 89,000 to about 600,000 - a 13% decrease.

But CRM software's ability to help users process calls

more quickly or sell more products to customers aren't the only priorities that IT managers have to worry about, Struminger noted. "It's not all about the [call] handle time," he said. "The customer is hard to acquire, and you should treat them the way they want to be treated. The software is a tool, but CRM is a whole culture."

Another way of making such a system work is to require that the workers using the software be accountable

die Beckwith, vice president of customer experience at the California State Automobile Association in San Francisco. The AAA affiliate uses campaign management and analytical CRM applications from E.piphany Inc. Beckwith said the tools can consolidate customer information from various databases and deliver the information in a single screen to marketing workers and data analysts.

When the association went live with the software, Beckwith said, it changed the performance goals of the end users and told them to use the in an E.piphany data mart in an effort to increase the success rates of marketing campaigns.

David Zink, CIO at Blue Cross & Blue Shield of Rhode Island, advised companies installing CRM applications to

The software is a tool, but CRM is a whole

SCOT STRUMINGER, VICE PRESI-DENT OF IT FOR CORPORATE HEAD-QUARTERS SYSTEMS FEDEX

try to keep the software as "vanilla" as possible. "Don't change the system if you can help it," Zink said, adding that IT managers also should make sure they have commitments of support from top corporate executives. He reported to the health care provider's chief operating officer during its CRM project.

The Providence-based company in December went live with a call center application from Pegasystems Inc. that replaced a set of homegrown green-screen applications. The software is meant to help Rhode Island's 680,000 Blue Cross & Blue Shield members check on the status of claims or the availability of fitness programs, Zink said. O 45580

IT, Business Units Look for Ways To Better Align Their Operations

IT execs cite poor communication as a barrier, survey results show

BY THOMAS HOFFMAN

Business executives often are quick to point out the shortcomings of IT managers, including their inability to talk about technology in business terms. But the lack of alignment between IT and business units is a two-way street, according to survey results that were released last week.

The survey, done by New York-based Deloitte Consulting and IDG Research Services in Framingham, Mass., showed that many IT managers think business leaders themselves need to do a better job of communicating corporate strategies and goals to their technology counterparts.

Nearly two-thirds of the 200 IT executives polled said that ineffective communication between business and IT managers represents a significant or moderate challenge within their companies (see chart). About half of the respondents

also cited a lack of funding for improving IT/business alignment as a big barrier.

Steve Scott, vice president of IT at Vision Service Plan in Rancho Cordova, Calif., said the key to establishing effective communications "is to have people who own that process and keep everyone honest about their responsibil-

ity to keep both the IT staff and business units well informed. That is the only way we'll get the necessary level of engagement to be successful."

Some companies are trying to bridge the alignment gap by tinkering with their IT governance models. For example, Philadelphiabased Lincoln National Corp. has taken several steps to tighten up its governance procedures over the past 12 months, said Jason Glazier, chief technology and e-commerce officer at the \$4.6 billion provider of life insurance, retirement plans and wealth management services.

More Oversight

ALIGNMENT GAP

Said "ineffective

business strategy and

and IT management" is a significant or mod-

erate challenge

Reported that their

companies have been

extremely success-

ful" at aligning IT

plans with corporate

strategies

goals between siness management

Project managers used to update executives on big technology investments only upon "special request," Glazier said.

Now, the workers who are leading IT projects must report every three months to Lincoln's sevenperson IT executive steering committee on how budgets and delivery schedules compare with the original plans.

In addition. Glazier said most of the business units at the company, which operates under the name Lincoln Financial Group, have set up more rigorous project approval and prioritization processes for deciding which IT initiatives to fund.

Vision Service Plan also has put a lot of effort into improving the alignment between IT and its business units, Scott said. For instance, prior to launching an enterprise architecture effort in early 2003, the IT department at the eve care benefits provider conducted extensive interviews with business executives and other key end users, according to Scott.

In some cases, the company's business units themselves now provide the project managers for IT initiatives, he added. "If we are not at the 'extremely well-aligned' level, we are fast approaching that mark." Scott said.

Nonetheless, incorporating more focused IT governance techniques can only go so far toward improving alignment within some companies, said John Parkinson, chief technologist for the Americas at consulting firm Cap Gemini Ernst & Young U.S. LLC.

"It all depends on how the business views IT." Parkinson said. At some companies, business leaders recognize the importance of investing in IT to achieve corporate goals, he noted. But, he said, "at the other end of the spectrum, business views IT as a necessary evil." O 45598

Diverse Skills Can Help IT Workers Avoid Offshore Ax

ITAA workshop stresses advantages of having a multidisciplinary background

BY PATRICK THIBODEAU ARLINGTON, VA

O THRIVE in today's workforce, IT professionals will need a mix of industryspecific skills and a multidisciplinary background as more programming and coding work is moved offshore.

That was the overriding message at a workforce forum last week coordinated by the Information Technology Association of America. The workshop included several large IT vendors and universities with technology programs.

One of the things Microsoft Corp. looks for in prospective employees is people "who can think about the silos in which they have been educated," said Marland Buckner, public policy manager at the vendor. One clue that someone may have this ability is an advanced degree in computer science as well as English, Buckner said.

"That is someone with skill sets significantly different than the traditional computerscience grad," he said.

At PeopleSoft Inc., the 12,000-employee workforce has evolved to focus on industry-specific approaches that are also localized for international users, said Steve Eberly, a vice president in the company's public services solution consultants division. "The workforce has matured to the point where they have become specialist rather than generalist," he said. That means workers need to know how to add business value in certain areas

in addition to having technical know-how

The kind of work that is likely to be moved offshore is the actual "construction phase" of a project, where requirements can be spelled out in detail, said Eberly.

Among the kinds of IT workers that defense and government IT contractor Northrop Grumman Corp. needs are those who can handle high-end IT projects, such as enterprise and network architects, program managers and ERP specialists, said Marilyn Stewart, the company's senior director of federal enterprise solutions.

Because many of Northrop Grumman's workers require security clearances, moving work offshore isn't an option. The clearance requirement slows down hiring, which has prompted the company to emphasize retention programs.

Because many of Northrop Grumman's workers require security clearances, moving work offshore isn't an option. The clearance requirement slows down hiring, which has prompted the company to emphasize retention programs.

Education programs are also broadening. Many universities and colleges offer IT programs that bring together a range of disciplines and technical skills to produce leaders who can align technology with business needs. Such programs are now trying to gain recognition under a formally accredited program; about 70 schools are involved in the effort.

Kurt Linberg, dean of Capella University's School of Technology in Minneapolis, said accreditation is necessary to ensure the quality of IT programs at the undergraduate level. "IT degree programs are popping up all over the country, and there is no ability to ensure quality," he said.

Accreditation is important to corporate hiring managers, who sometimes won't consider a job candidate's academic records unless they come from an accredited program,

said Linberg.

But Trentwell White, corporate liaison at Chicago-based National-Louis University. said that while accreditation may resound with human resources managers, an IT hiring manager will want to know about a job candidate's skills and expertise.

"So I'm not sure that accreditation - which the education community keeps trying to build up because it brings them students - is really the key," said White. O 45599

MORE ONLINE

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Continued from page I

HP e3000

stop support is two and half years away, it has become an urgent issue for some users. Ken Sletten, who manages e3000 systems at a federal government facility in Washington state that he asked not be further identified, said transferring knowledge about MPE to a third party won't be easy. "It's a pretty complex process, and as time goes on, the number of people within HP who know how to do this is going to [decline more and more]," he said.

Moreover, if users know that a third party will take over source-code support, it may allow them to slow their migrations from e3000 to other systems. "The importance of having the decision this year is so that users can make future plans," said Paul Edwards, an e3000 consultant in Carrollton, Texas.

An online survey released last week by Interex, the Sunnyvale, Calif.-based HP user group, backs the demand for quick action by HP. The top issue cited by the

223 respondents was for a decision There is clearly a from HP by the second half of this business case year on licensing MPE source code to one or more third parties.

HP doesn't see the need to make a decision this vear, said David

Wilde, HP's e3000 business manager, who stressed that the company must act in "the best overall interest" of the e3000 user base.

Wilde said a decision to license the source code might prompt some customers to replace their transition plans

with an alternative that may not meet their needs, simultaneously hurting HP business partners that provide migration services, "We don't help anybody if we do damage to that overall value chain," he

But Wilde said HP is also sensitive to the needs of customers who will be running for continuing e3000 systems MPE's life bebeyond 2006. HP expects "to make appropriate adiustments in our plans," he said.

DONNA GARVERICK. LONGS DRUG STORES CORP.

vond 2006.

He said the company has been receptive to customers' needs, citing the recent decision to extend support for MPE Version 6.5, which had been due to end this year, to 2006. Versions 7 and 7.5 are also being supported through 2006.

The issue is becoming in-

creasingly heated. Sletten raised complaints about HP's actions in e-mail he sent to a mailing list, attaching correspondence between HP and OpenMPE. HP subsequently pursued an effort to get Open-MPE members to sign nondisclosure agreements, raising concerns that public discussion of the matter could be curtailed. However, Wilde said members won't be blocked from voicing their opinions about user needs.

Domino Effect

Longs Drug Stores, meanwhile, has been migrating off the e3000 as part of a multimillion-dollar project, but Garverick said she believes the e3000 will be running mission-critical systems beyond 2006.

Being able to update the source code will be important, Garverick said. For instance, the e3000 uses FTP processes, but if the FTP process was

changed on an Intel-based system, the e3000 code would also have to be adjusted.

Interex's customer advocate, Debbie Lawson, said the e3000 user base may have been as large as 40,000 at one time, and previous surveys indicate that about 75% plan to migrate off the system.

In earlier years, as many as 1,200 responded to HP e3000 surveys, said Lawson. But she believes that the current response from 223 users is "a good representation of what this vocal minority wants."

HP has developed programs to move users to its HP 9000 system running its HP-UX version of Unix. Lawson said her view is that the reason HP is being noncommittal about third-party source-code licensing is that it "doesn't want the migration to be slowed down. They want to get people on other platforms as soon as possible." O 45595



Customers
Discuss the
Real Value of
Software
Assurance

Is Software Assurance Right for Your Business?

UCH HAS BEEN WRITTEN

about Microsoft's Software Assurance program, and many small to midsize enterprises (SMEs) wonder—is Software Assurance right for my business?

Assurance right for my outsiness?

Jeremy Lundin, IT Manager at Primera
Engineers, asked that very question as he
faced the problems caused by his company's network of five different operating
systems. Third-party applications kept
breaking, users in the same department
could not share documents—some computers couldn't even print. Lundin recommended Software Assurance as a way
to ensure all PC's could be upgraded at
the same time, thus protecting a standard
platform across the company.

When Primera Engineers signed on for Software Assurance, they got more than just a way to upgrade their software. As of September 1, 2003 Microsoft also added support benefits, low cost Office licenses for home use, technical training, and other new enhancements.

The enhancements to Software
Assurance fall into four key areas: productivity, support, tools and training. Each is designed to help companies use Software
Assurance to build business value, by helping a wide range of people—such as CIOs, IT staff and business persons—work smarter.

The CIO Strategic View: Staying in Control

THE CIO OF THE SMALL AND MIDsize enterprise must be a jack of all trades, responsible for everything from

Microsoft



When I was hired, we had five operating systems in use across the company. We couldn't effectively share documents or support newer applications, and some computers couldn't even print. Management wanted this fixed permanently and immediately. Software Assurance helped us get current, and it will help us stay current so we don't slide back into that situation again.

-JEREMY LUNDIN, IT Manager, Primera Engineers, Ltd.

building new servers to training end users, maintaining spam filters and replacing printer cartridges. Managing licenses is one thing on which they want to spend less time. Software Assurance gives time back to the CIO by making software license management simpler. Consider the following:

Software Assurance Keeps You From Falling Behind. Many CIOs say they would like to upgrade more frequently and that putting off upgrades inevitably results in running outdated and unsupported technology. Or, they only upgrade one part of their network, making it tougher and more costly to track and support multiple versions. By acquiring Software Assurance for software the company has licensed from Microsoft, the IT manager has the freedom to upgrade everything at the same time, maintaining a standard platform across the company.

 Software Assurance Helps You Stay Compliant. Most CIOs take license compliance seriously, but it can be challenging to

> keep license acquisition in pace with software deployment schedules. This can lead to the risk of noncompliance. That's a concern for many IT managers and their CEOs.

Because upgrades under licenses covered by Software Assurance can be deployed as and when they are needed, IT managers can better avoid noncompliance. This is a welcome benefit for Reid Nettle, Network Administrator at GT Development Corporation. He inherited an IT department where records

Essential Software Assurance Benefits

- New Version Rights
- Spread Payments Out
- Problem Resolution Support

were not well maintained and the acquisition of new licenses was not always timely. IT staffers were in the habit of loading software from a main CD, without tracking what they deployed. Management decided to get serious about staying compliant, and turned to Software Assurance for help. Nettle says that it's now easier to stay compliant-since the server or PC has an underlying license with Software Assurance, generally they can load any version they like without worrying about under-licensing.

Software Assurance Helps Gain Budgetary
Control. Another advantage of Software
Assurance is the way it helps CIOs avoid the
expensive habit of purchasing software licenses
one at a time. Since the next version is
already budgeted for, they can deploy it without making another budget request. Similarly,
one can upgrade servers, desktop applications
and operating systems at any time, without
making special budget requests that require.

The enhancements to Software Assurance fall into 4 key areas:

1 Productivity2 Support3 Tools4 Training



lengthy review and approval. This can be especially useful for avoiding cost over-runs when new applications are being rolled out.

Companies now have the option of making annual Software Assurance payments over three years, which provides much-needed budget relief. Even smaller companies have this option, with Microsoft's Open License Value program, aimed at companies with fewer than 250 PCs.

Software Assurance also helps CIOs remove line items from their budget. If they currently spend money on server support, IT training or Office licenses for home PC's, benefits of these types now come at little or no additional charge.

The CIO Action View: Enhancing Support

AT MANY COMPANIES, THE BURDEN of technology support falls on the shoulders of a resource constrained IT staff with versatile skills and multiple priorities. Software Assurance provides a number of free support benefits to make the IT staffer's life easier.

 Complimentary Server Support One of the most well received benefits of Software Assurance for servers is free break/fix support for Open License Value, Select and Enterprise Agreement customers. The details vary (limit 2 incidents for Open License Value, no limit for Select and EA) so you should consider how much support you need when you order your next server license with Software Assurance. Many companies that chose Software Assurance say it is already paying off for them. Dave Miller, IT manager at Giftcertificates,com, says that his team used to waste a lot of time trying to troubleshoot server problems before they sprang for a support call. But with their Select agreement, Software Assurance comes with complimentary break/fix support for servers. Now Miller's people are more inclined to call for support immediately. Says Miller, "This saves us time, but it also saves us worre."

 IT Pro Training Days When IT budgets are reduced, one of the first items to go is IT Training. Software Assurance protects this important investment with complimentary IT Pro Training days, offered through any Microsoft Certified Partner for Learning Solutions (Microsoft

CPLS). Since technology professionals must continually educate themselves to keep abreast of changing technologies, such a benefit boosts both morale and productivity.

• Additional Support

tional support features, such as a subscription to TechNet Plus, an extensive series of CD-ROM media containing new product and other information. TechNet Managed Newsgroups is another self-help feature, allowing IT professionals to ask questions in a technical newsgroup-without fear of being spammed. eLearning is web-based end-user training, which saves the IT staff the time and expense of training new users when new versions are deployed. Online Concierge Chat allows one-on-one. Web-based chat sessions with Microsoft online advisors to help quickly locate information needed to troubleshoot technology issues. WinPE is a programming tool to automate desktop OS updates. Other benefits, such as Corporate Error Reporting

and Extended Lifecycle Hotfix Support, may

also be valuable time - and cost-savers.

Tools Software Assurance comes with addi-

Essential Software Assurance Benefits

- Complimentary Server Support
- **Training Vouchers**
- TechNet Plus with Online Concierge
- Extended Lifecycle Hotfix Support
- **Corporate Error Reporting**

We try to stay compliant, but we load software regularly and sometimes lose track of what is deployed on each PC. With Software Assurance, you can just count the number of SA licenses you have and the number of PC's. You don't have to record which version is deployed on each computer. Compliance is easier to track.

—REID NETTLE, Network Administrator, GT Development Corp

The Business Manager View: Ensuring Business Growth

WHILE THE CIO IS FOCUSED ON

managing the company's infrastructure, the CEO is focused on the company's growth. And while Software Assurance may appear to be largely a technology decision, it also has important consequences for the business executive.

• Software Assurance Helps Employees
Become more Productive. One of the most
compelling benefits of Software Assurance is
the Home Use Program, which provides low
cost Office licenses for employees' home use.
With the rising importance of remote computing and work-at-home arrangements, many
business managers find this lets their workforce get more done without incremental cost
to the company. And because the license is
between Microsoft and the end user, your IT
staff does not have to track usage.

• Software Assurance Reduces Business Risk. Today more than ever, the CEO feels

> personally responsible for the actions of the company's employees, and wants to minimize business risk. One such risk is exposure to licensing non-compliance. Software Assurance reduces

the risk to business by providing additional assurance that a company is licensed to the software in use.

SA Helps You Protect—Or Build—A
Competitive Advantage. While some businesses have reined in IT budgets, others
continue to invest in more advanced and
secure technologies. They believe this gives
them a number of advantages—for example,
access to new line-of-business applications,
lower support costs and more secure networks.

Essential Software Assurance Benefits

- eLearning
- Home Use Program
- Employee Purchase Program

That's a strategic decision your company leaders will need to make. Software Assurance is your investment, in good times and bad, in the leading technology. In the end, CIOs must decide which technology and services represent the most bang for their buck. SA, with its ability to beef up employee skills through training, or provide productivity boosters to business users, can provide key support in building a more productive, value-driven company.

For More Information on Software Assurance

To learn more about the enhancements to Microsoft's Software Assurance for volume licensing programs, go to www.microsoft.com/licensing/programs/sa/ or contact your Microsoft Account Manager or Preferred Reseller. Contact your Vilicrosoft Account Manager to calculate your own rate of return. We encourage you to share this supplement with your peers.

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Got a mobile or wireless solution so good it's worthy of an award?

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Nominations are welcomed from IT Users/Implementers; Systems Integrators/Consultants; IT vendors on behalf of customers, or, their own In-House Deployment; and PR firms on behalf of clients. Multiple submissions of case studies describing different deployments per company/organization will be considered.

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You'll find the nomination form and learn more about Mobile & Wireless World at: www.mwwusa.com But hurry! The deadline is Monday, April 12th at 9:00pm Eastern time.

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Sears Taps CSC for \$2B Outsourcing Deal

BY TODD R. WEISS

Following through on plans disclosed by its CIO in January, Sears, Roebuck and Co. is negotiating with Computer Sciences Corp. on a partial IT outsourcing deal that's expected to be worth about \$2 billion over the next 10 years.

The deal would give CSC responsibility for managing much of the IT infrastructure at Sears and would affect about 260 of the retailer's 1,160 IT workers, although Sears this month said it expects CSC to hire "substantially all" of the affected staffers.

A final agreement should be signed during the second quarter, according to Sears. The infrastructure technologies that are due to be outsourced to CSC include servers, desktop PCs and other client devices, voice and data networks, and the systems that support Sears-related Web sites. CSC would also handle help desk operations as well as IT asset and risk management, said Sears spokesman Chris Brathwaite.

In a statement, Sears CIO Gary Kelly said the services provided by El Segundo, Calif-based CSC should "heighten the stability and reliability of Sears' technical infrastructure" and reduce the cost of future IT improvements. He added that CSC "will also provide fair and equitable treatment" for the affected IT workers.

At a retail IT conference two months ago, Kelly told Computerworld that he planned to outsource some of Sears' IT operations to cut costs and improve profit margins [QuickLink 44112]. In addition to CSC, he named IBM Global Services, Hewlett-Packard Co., Electronic Data Systems Corp. and Affiliated Computer Services Inc. as the vendors vying for the deal.

The company's mainframes

MORE NEWS

Procter & Gamble expands an outsourcing deal with Hewlett-Packard to include its accounts payable operations:

QuickLink 45500 www.computerworld.com and core retail systems won't be included in the outsourcing deal, nor will the separate IT operations of catalog retailer Lands' End Inc., which Sears acquired in 2002. Brathwaite said Sears will continue to manage the retail systems internally. The mainframes are already supported by IBM under an existing outsourcing contract, he added.

Sears decided to do more outsourcing after a review of its IT infrastructure showed that some pieces need to be improved, Brathwaite said. Working with CSC on the improvements should yield savings that will let Sears focus more resources on its retail systems. he said. 6 45543

Strength in Numbers.



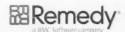
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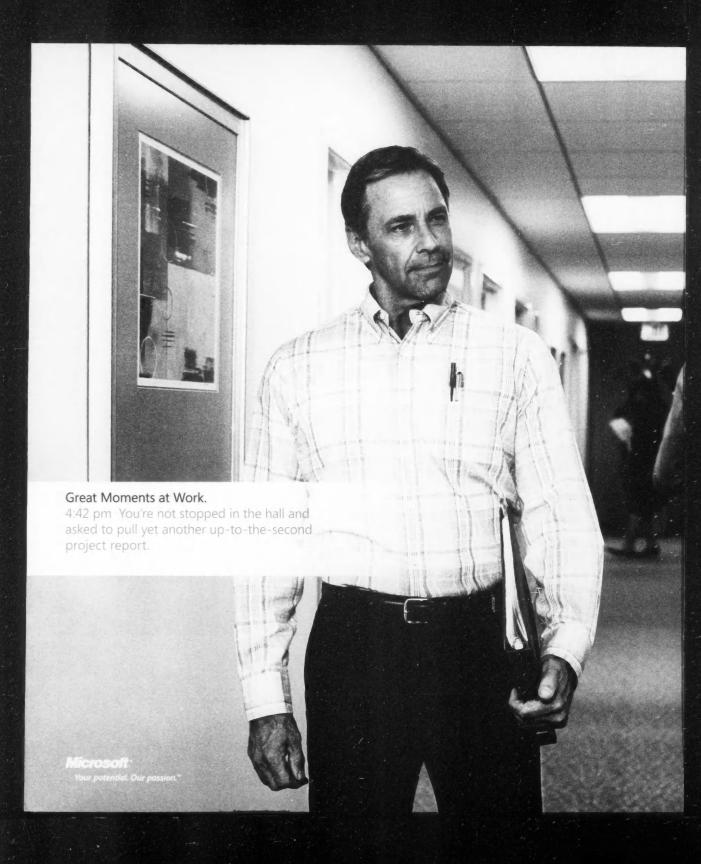
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MARYFRAN JOHNSON

Privacy Hostages

VE RECENTLY GOTTEN HOOKED on a BBC America TV program called *What Not to Wear*, in which two witty, quintessentially British "style journalists" single out some

walking fashion disaster for a wardrobe update and makeover. In the first scene, the show's hosts merrily pounce on their startled sartorial slob, presenting her with a big check for an upcoming shopping spree and explaining how friends or relations helped arrange the whole ambush. Lots of shricking and laughter ensues.

ensues.

And then the hosts drop the big bomb: Hidden cameras have been tracking the hapless victim in her most unsuitable and unflattering outfits, for all the world to see. As that realization sinks in, the makeover subject suddenly stops laughing. Invariably, the same horrified question comes next: "You've been secretly

filming me?"

That invasion-of-privacy moment passes quickly, and the show marches delightfully onward. But I wonder how long it will be before such candid-camera entertainment becomes flatly illegal, plowed under the mountain of new privacy rules and regulations enclosing us and all the data generated about us (streaming video of our wardrobes included). I realize that data privacy is vying for a place alongside motherhood and apple pie in the public sentiment these days, but I wonder if we aren't slipping over into paranoia as we try to build a fortress of legal and technical protections around every bit of personal information that gets loose in the world.

Not that there's much choice anymore. The sheer enormity of what IT departments are facing at this intersection of mandated regulatory compliance, customer data protection and risk management was starkly evident in our special report on privacy last week ["Compliance Headaches,"



QuickLink 45078]. Big companies can expect to spend millions on privacy compliance programs and activities in the coming years, just to keep pace with existing federal laws such as HIPAA and Sarbanes-Oxley. Yet legal precedents are few, implementation procedures are largely experimental, and vaguely written guidelines vary from

state to state. The infamous California Senate Bill 1386, which requires notification of any unauthorized disclosures of personal information, calls for customer data to be encrypted but doesn't specify to what level.

"Over the past two years, we've had over 1,000 new privacy laws that have affected us," said Joel Tietz, chief privacy officer at AXA Financial Services in New York, who was quoted in our "Privacy Potholes" story [QuickLink 45101]. Like many companies, AXA is using a CRM system to dig into its customer data for use-

ful trends and potential revenue opportunities. But unlike many companies, the financial firm is being aggressively attentive to mapping customer privacy preferences against a database that consolidates multiple applications and production systems.

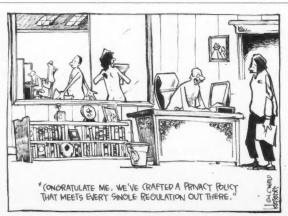
Monitoring privacy compliance inside your own business is no longer enough, however. Your partners, supply chain vendors and any other suppliers that access your data — particularly those offshore and operating under looser legal strictures — are part of the risk that senior IT managers now must protect against.

So prepare to be held hostage to privacy compliance. Spending in this realm will gobble up increasingly bigger portions of IT corporate budgets in the years to come. Larger companies will have to set up privacy compliance offices, which will run up additional bills for data protection staffers, expert consultants and specialized training.

The only effective strategy the experts all agree upon is this: Make sure you're meeting the maximum requirements of the strictest privacy laws affecting your industry.

If you don't, you'd better update your own wardrobe. Your next appearance might be on Court TV.

O 45550



PIMM FOX

Storage Tools You Can Use

VERYONE TAKES their storage requirements seriously. Storage management deserves the same level of attention.

As your storage capacity increases and becomes more varied, it's crucial to have tools that can get you real-time information about your network-attached storage, storage-area networks and direct-attached storage operations.

At Owatonna, Minn.-based Federated Mutual Insurance Co., WAN/LAN administrator Mark Mielke has 3,000 employees pounding away at his storage systems. He has a typically atypical enterprise setup: Xiotech Corp. Magnitude storage arrays, hard drives for servers, and cluster-type servers for file retention, including customer

records and applications. In all, depending on how he's got things configured, there's anywhere from 2.5TB to 5TB of storage that has to be accounted for, allocated and managed.

"We didn't have any good tools to look into what we were doing with storage," says Mielke.

"We couldn't see into the future."

And that's the story with storage

And that's the story with storage, isn't it? Today handles itself, but you've always got to be one or two steps ahead of your users.

riter in Santa Barbara Calif. Contact him at

Federated Mutual needed something multifunctional to handle its SAN switches, its main storage units, its Windows NT client pieces and the Novell side. Those multiple platforms and vendors led the company to choose Dallas-based Tek-Tools Inc. and its Storage Profiler software.

Mielke says installation was easy, and the tools provide good analysis, with the power to drill down into each type of data that Federated Mutual stores.

"We have Storage Profiler giving us feedback on servers," says Mielke, "and we're ramping up on all our SAN equipment and our switches." He's using SNMP to set up alert criteria on hosts so that at 80% of capacity, for ex-

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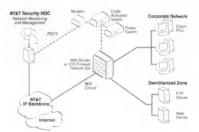
AT&T's security solutions do a number on hackers, viruses and intrusions so they don't do one on you

AT&T delivers a powerful suite of integrated security solutions that can assess vulnerabilities, protect against unauthorized access, proactively detect attacks, and rapidly respond to suspicious activities or events. It's like a virtual security guard to help protect your network from unwanted intruders.

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- · Network scanning services

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WHAT THE INDUSTRY IS SAYING

 AT&T [Managed Security Services] was awarded the Customer Solutions Excellence Award – "For implementing extremely flexible management offerings, being the first to bring application security services to the market, and offering the widest array of services in the industry, AT&T [Managed Security Services] is awarded the Customer Solutions Excellence Award." – Frost & Sullivan, July 2003

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Representative, or visit www.att.com/networking.



ample, Mielke's team will be signaled. He can also monitor events in Windows NT, look at memory space on NetWare and get a real view of each storage point.

The tool also makes it possible to normalize data into common tables for enterprisewide reports so there's less guesswork about storage needs. Building custom reporting tools is also straightforward, using either Java or templates built into the Profiler suite.

The automotive unit of Siemens AG used similar storage management techniques to do file analysis on its network-attached storage boxes, and it uses the same reporting tools to check backup and network performance.

This new area of storage resource management should help cut operating expenses and help users get the most from their storage investments.

Big companies like Siemens can start by digesting small bites of their storage strategies and looking at the management problem with an eye toward reclaiming some of the storage space that's wasted because of poor visibility.

THORNTON A. MAY

Tricks of The Futuring Trade

ESEARCH from UCLA's Managing the Information Resource Program has brought to the surface three highvalue techniques for planning for the future that are inexpensive to put into

Déjà viewing. This technique, which is frequently used to craft insight-producing, behavior-changing scenarios of what lies ahead and what actions should be taken, involves looking intensely at the current period and asking, "Has anyone experienced anything like this before?"

In a workshop conducted for the IT Leadership Academy at Florida Community College at Jacksonville, I asked that question about the situation that technology leaders find themselves in today. The assembled decision-makers kicked around various situations seeking analogies and came up with the following:

■ The trip to hell described in Dante's Inferno.

■ The Clinton White House follow-

ing the revelations about Monica Lewinsky. ("One mistake, and everybody hates us.")

■ President Bush and nation-building in Iraq. ("Long, hard slog. No real idea how much it's going to cost or when it's going to end.")

Two déjà views had the most resonance for today's IT managers.

The first was the post-Sputnik era. The launch of the Russian satellite on Oct.

4, 1957, shook an almost universally held belief that the U.S. would always be significantly ahead of the Soviet Union in all aspects of science and technology. Today, the widely adopted practice of outsourcing higher-end IT work has similarly shaken the belief that the U.S. will always lead the world in computer technology.

The second was the first big management-consulting fad, "scientific management," which cropped up in the early 20th century. Frederick Taylor synthesized several existing ideas



longtime industry observer, management consultant and com mentator. Contact him may@anl.com

to create a process to assist management in reducing waste through the careful study of work and the adoption of standardized work practices. Today, the processes of IT are being closely studied with an eye toward simplification, standardization and significant improvement in productivity.

Bringing the future to the present. This concept involves projecting a future point in time and painting a

picture of what you want to happen. Examples: During a joint session of Congress on May 25, 1961, President Kennedy looked a decade ahead and saw an American on the moon. And following the Jan. 17, 1994, Northridge, Calif., earthquake, a team of dedicated construction professionals foresaw the Santa Monica Freeway being reopened "safely to the flow of traffic in 66 days," even though some experts said it would take two years.

IT professionals who bring the future to the present envision a bold scenario

that people don't believe they can make happen, then they structure their activities so that they deliver capabilities that will render the competition irrelevant, on time and within budget.

Experience hitchhiking. This technique is a personified version of déjà viewing. With déjà viewing, you look for broad-based analogs. For example, you ask yourself how President Eisenhower responded to the challenge of Sputnik and whether there are lessons in that for crafting your response to outsourcing. With experience hitchhiking, you seek out individuals and companies whose experiences most closely resemble a situation you are about to enter or are thinking of entering. Then you ring up these "experiencers" and ask if you can hitchhike, or ride their learning curves.

By combining these three techniques, you will ride a limo to your future, not someone else's bus to a destination you may not enjoy. O 45464

WANT OUR OPINION?

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The Practice of 'Intelligent Disobedience'

WAS QUOTED in last month's Think Tank [QuickLink 44153] saying, "The role of the IT organization is to have the right solution to the business problem, not to decide what really needs to be done." This does not in any manner convey that the CIO is not supposed to actively contribute to the creation and implementation of company strategy. as suggested by Michael Hugos [QuickLink 44587] and Paul Glen [QuickLink 44559] in Readers' Letters of March 1. Developing the right solution means being involved in working intimately with business. executives. It does not mean deciding what to implement. That is a decision for the business side.

In a survey of 78 participants conducted during a two-day project management boot camp at Comdex 2003, 49% said that their organization's strategy wasn't well defined or broadly communicated. 50% said that their projects weren't aligned with the organization's strategy, and 57% said that the value of their projects to the business wasn't well defined. Why do CIOs continue to put resources

into these projects? I certainly hope it's not in the name of alignment and involvement with the business community. To our client CIOs, we have always advised practicing "intelligent disobedience," an action that's designed to keep both the CIO and more importantly the corporation out of harm's way. And we remind our business executive clients of the time-tested warning by Warren Buffett: "Never ask the barber if you need a haircut."

Gopal K. Kapur President, Center for Project Management, San Ramon,

Evolving Linux

THE COMMENTS in the article "Users Wary About Open-Source Alternatives to Windows OS" [QuickLink 45042] are all valid, but if the day ever comes when robust, low-cost ERP solutions arrive on Linux, then the competition will begin. That's what small businesses build their computer networks around, and the rest just follows, regardless of end-user complaining.

Microsoft conquered small business with turnkey SQL Serverbased ERP products developed by third-party partners such as Great Plains. Ironically, this was a playing field created and then lost by Novell. As long as Linux builds in enough point-and-click administration functionality to support the do-it-yourselfers, then the support issues aren't any greater than they were with Windows just a few short vears ago.

Bill Pratt

Vice president of operations, Kinamed Inc., Camarillo, Calif.

Stopping Spam

THE FIRST ITEM in the "Seven Steps to Take Now" box [Quick-Link 44797] accompanying the "Winning Ways to Stop Spam" feature in the March 1 issue (which says to use a GIF image file instead of publishing e-mail addresses on the Web) can cause problems for users who have an inability to view images, especially those who use speech synthesis tools to read Web pages. And harvesters tend to look not only at the viewable content of a Web page but also at the embedded items, particularly mailto: links. A different solution that seems to work for many companies is Web-based input forms that don't use e-mail facilities. The user doesn't get your e-mail address until he applies.

Step 4 (use ISPs that have zero tolerance for spammers) should also mention a contract escape clause, because even spam-supporting ISPs have policies against spammers. If they don't enforce their zero-tolerance policies, then they are spam supporters and don't deserve your money.

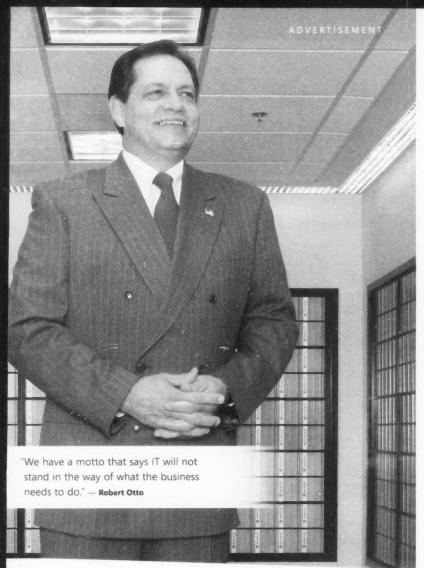
Larry Williams

Information security administrator, Portland, Ore.

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Great Moments at Work.

Success Stories of an IT Hero

Robert Otto CIO and CTO

The United States Postal Service, Washington, D.C.

Robert Otto started his professional career as a clerk. Today he is the CIO and CTO of the United States Postal Service*, which processes about 55 percent of the world's daily mail volume. Tasked with reengineering the USPS's technology infrastructure, he's led an effort to consolidate and centralize disparate systems, standardize tools and vendors, upgrade the network, and embrace the Web and wireless technology.

Otto and his team have built an advanced computing environment that has saved the USPS* some \$50 million annually. More than 30 Web-enabled self-service applications help employees manage items such as health benefits and life insurance, as well as training on demand.

Last year, more than 176 million consumers used the usps.com website. The USPS also introduced a hugely popular desktop service called Click-N-Ship", which allows mailers to create their own shipping labels.

Great Moment at Work: "Seeing the positive impact this project has had on the employees and customers of the USPS."

Microsoft Office System salutes those who have done great work in the IT field.

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TECHNOLOGY

EMERGING TECHNOLOGIES SANs Come Up to Speed

Two new high-speed Fibre Channel standards could provide a migration path as SANs ascend to 10Gbit/sec. speeds. Page 30

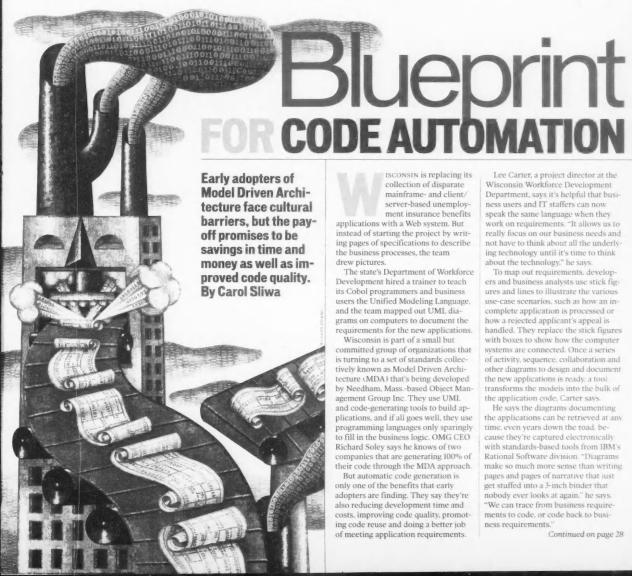
480 **Innovation for Hire**

Satyam Cherukuri, CEO of Sarnoff Corp., discusses the meaning of innovation and how his company has turned it into a methodology. Page 32 FUTURE WATCH

Chameleon Computing

Reconfigurable computing architectures are finally beginning to emerge as mobile applications begin testing traditional microprocessor capabilities. Page 34





ISCONSIN is replacing its collection of disparate mainframe- and client/ server-based unemployment insurance benefits applications with a Web system. But instead of starting the project by writing pages of specifications to describe the business processes, the team drew pictures.

The state's Department of Workforce Development hired a trainer to teach its Cobol programmers and business users the Unified Modeling Language, and the team mapped out UML diagrams on computers to document the requirements for the new applications.

Wisconsin is part of a small but committed group of organizations that is turning to a set of standards collectively known as Model Driven Architecture (MDA) that's being developed by Needham, Mass,-based Object Management Group Inc. They use UML and code-generating tools to build applications, and if all goes well, they use programming languages only sparingly to fill in the business logic. OMG CEO Richard Soley says he knows of two companies that are generating 100% of their code through the MDA approach.

But automatic code generation is only one of the benefits that early adopters are finding. They say they're also reducing development time and costs, improving code quality, promoting code reuse and doing a better job of meeting application requirements.

Lee Carter, a project director at the Wisconsin Workforce Development Department, says it's helpful that business users and IT staffers can now speak the same language when they work on requirements. "It allows us to really focus on our business needs and not have to think about all the underlying technology until it's time to think about the technology," he says.

To map out requirements, developers and business analysts use stick figures and lines to illustrate the various use-case scenarios, such as how an incomplete application is processed or how a rejected applicant's appeal is handled. They replace the stick figures with boxes to show how the computer systems are connected. Once a series of activity, sequence, collaboration and other diagrams to design and document the new applications is ready, a tool transforms the models into the bulk of the application code, Carter says.

He says the diagrams documenting the applications can be retrieved at any time, even years down the road, because they're captured electronically with standards-based tools from IBM's Rational Software division. "Diagrams make so much more sense than writing pages and pages of narrative that just get stuffed into a 3-inch binder that nobody ever looks at again," he says. "We can trace from business requirements to code, or code back to business requirements.

Continued on page 28



scout

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Continued from page 25

To ease the transition to MDA, the project team brought in a qualified service provider, St. Paul, Minn.-based Adaptive Team Collaboration Inc., from the OMG's MDA FastStart program. Chris Armstrong, chief technology officer at ATC, has alternately served as mentor, trainer, counselor, psychiatrist and, most recently, process auditor, Carter says.

Another critical decision was selecting Dublin-based Curam Software's IZEE-based framework for building applications specific to the government social-services sector. The business requirements that the Wisconsin team specified through UML and defined through a platform-independent model (PIM) effectively integrate into the Curam software, Carter says. Systems integrator Tier Technologies Inc. also helped with the work.

Carter says that so far, the project is exceeding expectations. The team completed project requirements 60 days ahead of schedule. The first production release of the application is due in November, with other pieces to follow during the next two years. That's a shorter time frame than for similar projects states are undertaking using traditional approaches, Carter says.

PFPC Inc. in Wilmington, Del., a provider of IT outsourcing services and applications for the investment management industry, says customer projects that previously took six months to complete are taking four using MDA.

Michael Harte, the company's CIO, says the MDA approach is instilling discipline in his staff, leading to greater accuracy. Because the process forces more work to be produced upfront, serious design flaws can be discovered earlier than they could in the past.

Ian Maung, a senior architect at PFPC, notes that the MDA approach helps developers who work in different geographic locations to communicate better because they're able to understand the interfaces their colleagues expect.

Maung says that in the future, MDA might enable easier switches between runtime platforms, since the business and application logic is defined independently of the platform, and the PIM could simply be revised to generate a new

platform-specific model. He hopes action semantics in UML 2.0 might pave the way for 100% code generation to standards-based platforms such as J2EE, and MDA ultimately may enable customized code generation.

Although the UML/MDA approach is gaining increasingly wider adoption by application architects, UML usage includes no more than 15% of developers, according to several analysts' estimates. Critics say its complexity can be daunting, and the cultural change for IT shops accustomed to pounding out code can be difficult to negotiate.

Building an Application Using MDA

User develops a platform-independent model to represent desired business functionality and behavior – but not technology details.

An MDA-compliant tool applies standard mapping to generate a platform-specific model, for middleware based on J2EE or XML/SOAP, from PIM.

MDA tool generates all or most of implementation code for deployment technology. Analyst Carl Zetie at Forrester Research Inc. says few development teams have the patience to go deep into a project and not have a line of code to show for it. "With conventional IT shops, there's always the urge to code, and that to me is the single biggest barrier to any kind of modeling," he says.

Thomas Murphy, an analyst at Meta Group Inc., says many developers are skeptical based on past experiences with 4GL tools that produced code that was hard to maintain. He predicts that the use of model-driven and declarative approaches to development will increase — but not necessarily with the

UML/MDA approach, which faces many challenges.

Early adopters are aware of many of them. For example, Maung says tools that claim to fully support standards often don't. And Per Gyllstrom, chief architect at PFPC, notes that some developers fear they may be displaced if an entire application can be generated through models and tools. It's important, he says, to start with small projects to convince skeptics of MDA's merits.

Although one of the benefits of MDA is code reuse, developers can be reluctant to trust a colleague's code or code that has been generated by a tool. Fireman's Fund Insurance Co. in Novato, Calif., encountered such resistance while undertaking a major project to overhaul its claims system, which went into production in 2000. A seven-person team skilled in object-oriented development used a set of UML class models from IBM called the Insurance Application Architecture (IAA) to generate code into an Enterprise JavaBeans-based framework for persistence, messaging, events and object distribution.

Rational Rose scripts produced over 80% of the architectural code, and Fireman's Fund later switched to a code-generation tool from Montrealbased Codagen Technologies Corp. Within weeks, Codagen's rules engine and reusable templates eliminated the need for Rose scripts to do the transformation from model to code.

But the effort stalled as priorities shifted, and tension mounted between the core architecture team and the developers who had to hand-code the business logic, says Bill Nadal, an enterprise architect at Fireman's Fund.

The enterprise architecture team picked up the torch again in 2002, when it designed a blueprint for a reusable component stack with the aid of Peter Herzum, an expert in component-oriented software manufacturing. The team's goal was a "software factory" approach to development, in which components would be reused and snapped together like Legos to build applications.

A proof of concept done with Herzum Software LLC and Codagen targeted IBM's MQSeries Financial Edition, which used the IAA class models and Rose scripts to generate services and XML-based messages, Nadal says. The team demonstrated that, using the MDA approach, code could be automatically generated for persistence classes, service interfaces and XML messages.

Enterprise architects at Fireman's Fund are currently using their component blueprints to build core foundation models and services for security, context management and metadata management. In the future, they plan to focus on business-level components.

"Everyone thinks an enterprisewide approach takes longer and is more expensive," says Nadal. "It actually means you may build a higher-quality component once instead of many times across individual projects. MDA is an important step in achieving that goal." © 45278

A Different Model for MICROSOFT

One prominent tools vendor that has no plans to build tools to support UML and MDA is **Microsoft Corp.**

Prashant Sridharan, a lead product manager in Microsoft's tools group, says the company is fully behind the generic idea of model-driven development. But Microsoft believes there's a need for models closely tied to the operating system.

Sridharan says the UML/MDA camp promotes the notion "that you can model once and write your code on a number of platforms," but that's not effective in practice. Microsoft is, therefore, working on a modeling engine and modeling framework to allow users to describe service-orient-ed applications in a Windows-centric environment. He says he expects partners to deliver UML tools on top of it.

Whitehorse, the code name for the ser-

vice-oriented design tool, is due in the first half of 2005, with Microsoft's Visual Studio 2005 development environment.

One of the key elements of Whitehorse is an XML-based domain-specific language to describe services or pieces of a network infrastructure and how they connect. Microsoft plans to publish a software development kit for large companies that want to build DSLs.

"The value is there only if you're going to see a massive amount of productivity out of it, because II is a massive amount of effort to do it," Sridharan cautions.

Three designers that Microsoft plans to ship with Whitehorse will help users to create diagrams based on the DSLs. A logical infrastructure designer allows a user to visually depict, with boxes and lines, what each piece of hardware in a network can do. A service-oriented application designer can be used to describe

Web services and the protocols to connect them. A class designer is for describing classes or interfaces and the inheritance relationships among them.

Using Whitehorse, an architect who designs a service-oriented application will be able to validate whether the application will work in the network topology that's described. Sridharan savs.

And the action of dragging and dropping a service onto the service-oriented designer doesn't merely create a model, it also generates code, because the service-oriented designer is in sync with the class designer and the underlying code. Sridharan says users shouldn't expect 100% code generation, since they will still need to write business logic, but they will see progressively more code generation over time.

- Carol Sliwa

UML 2.0 ON THE WAY

Two IBM technologists involved with developing the standard discuss its future:



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SAIS Come Up to Speed outlook: Cost and backward-compatibility issues

could delay acceptance of 10Gbit Fibre Channel in favor of two interim standards, BY LUCAS MEARIAN

TORAGE networking equipment vendors are preparing a slew of new Fibre Channel switches and host bus adapters that can effectively double the speed of current storage-area networks (SAN) to 4Gbit/sec. Products based on the 4Gbit standard, first advocated by chip makers last year and approved by the Fibre Channel Industry Association (FCIA) and the American National Standards Institute last June, are slated

could serve as an interim migration step to products based on the 10Gbit/sec. Fibre Channel specification approved by the

to roll out this year.

The technology

FCIA last November. But not all users are convinced that more speed is better, especially where application servers are the bottleneck. "On the fabric side, it's screaming ... but you'd saturate your [server] bus long before you'd saturate a 1Gbit or 2Gbit Fibre Channel connection," says Gary Pilafas, senior storage and systems architect

at UAL Loyalty Services Inc., an Arlington Heights, Ill.-based unit of United Air Lines Inc.

Mike Bennett, a senior network engineer at Lawrence Berkeley National Laboratory in Berkeley, Calif., believes that new servers being offered with 64-bit processors and faster internal bus designs will require more than the additional bandwidth being offered by 4Gbit Fibre Channel switches, RAID controllers and host bus adapters for SANs.

EMERGING P "Two years out. is there going to be a market for it? I'd say no doubt.

It's like garage space: If you have it, you'll fill it," Bennett

By that time, however, 4Gbit products will face competition from devices based on a faster 10Gbit standard. In fact, as vendors begin volume shipments of 4Gbit products this summer, they'll be introducing early 10Gbit products as well.

Bennett says 10Gbit Ethernet will challenge Fibre Channel as an alternative storage interconnect if Fibre Channel

It's like garage space: If you have it, you'll fill it.

MIKE BENNETT. SENIOR NETWORK ENGINEER. LAWRENCE BERKELEY NATIONAL LABORATORY

doesn't keep up, so a leap to 10Gbit is a must. But 4Gbit devices offer critical advantages: Analysts and vendors say the 10Gbit/sec. devices won't be backward compatible with current 1Gbit or 2Gbit products. And they're expected to cost about \$5,000 per port five times as much as current 2Gbit devices.

In contrast, the upcoming 4Gbit devices are expected to cost about \$1,000 per port, the same as their 2Gbit cousins.

As a result, analyst Rick Villars at market research company IDC in Framingham, Mass., is bullish on the standard's prospects. He predicts that 4Gbit products will hit the market in the third quarter but account for just 10% of the market within the first 12 months. After two years, however, he expects that number to leap to 90% as competitively priced 4Gbit products replace slower offerings.

"They're going to be the best technology at the lowest price," Villars says.

Meanwhile, high prices and backward-compatibility concerns will limit the appeal of next-generation 10Gbit devices. "You have to replace anything that the 10Gbit technology touches with all-new 10Gbit equipment," says

The Third Option

Aware of these limitations, vendors came forward with the interim 4Gbit standard. And hedging their bets yet again, SAN equipment vendors have another interim Fibre Channel standard in the offing. Disk drive manufacturers are rallying around a newly proposed 8Gbit specification, and SAN managers could see products within three years, according to manufacturers.

Skip Jones, chairman of the FCIA's Speed Forum, says the organization held its first meeting on 8Gbit Fibre Channel last month. "If we get out there three years, and you're still paying a huge premium for 10Gbit technology and you want that backward compatibility, that's where 8Gbit will be attractive," he says.

For now, the focus is on 4Gbit products. Several vendors, including San Jose-based Hitachi Global Storage Technologies Inc., the disk manufacturing arm of Hitachi Data Systems Inc. (HDS), have announced 4Gbit Fibre Channel offerings (see box at right).

So where does that leave 10Gbit Fibre Channel? Despite the cost and compatibility issues, vendors see a place for the developing standard in high-end SANs. Hubert Yoshida, chief technology officer at HDS, says 10Gbit products will serve as an interswitch link that can cobble together many switches in a SAN fabric while using fewer ports. He also sees it as a way to create many virtual ports over one physical switch port. "Through the same physical port, we can allow up to 128 different users," he says.

Arun Taneja, an analyst at The Taneja Group in Hopkinton, Mass., predicts that the demand for 10Gbit Fibre Channel will be enormous, both for connecting internal disk drives to RAID controllers and for interswitch

4Gbit

Although some vendors are preparing 46bit Fibre Channel devices for release as early as this summer, others are more cautious.

Hitachi Data Systems has begun joint testing of new 4Gbit/sec. hard drives with resellers and expects those devices to be available by

Emulex Corp. in Costa Mesa. Calif., has announced its embedded 4Gbit storage switching technology and has plans for a host bus adapter this year and a 10Gbit HBA in

QLogic Corp. in Aliso Viejo, Calif., currently offers a switch that has two 10Gbit ports for interconnections between switches. By midyear, it plans to ship 4Gbit HBAs and switches that support 4Gbit/sec. and 10Gbit/ sec. speeds.

Cisco Systems Inc. hasn't vet committed to producing 46bit products, but it has announced support for the 10Gbit standard. It plans to make a 10Gbit module available on its MDS 9000 SAN switches sometime this year.

Brocade Communications Systems Inc. in San Jose doesn't plan to begin testing 4Gbit and 10Gbit switches with storage device manufacturers until 2005.

links in corporate SANs.

"There's no large enterprise I know of in the Fortune 300 or 400 range that doesn't have a massive number of Fibre Channel switches at this point in time. As they replace those switches or directors with 4Gbit Fibre Channel ports, there's no question they'll need multiple 10Gbit ports to balance that out," Taneja says. O 45220

Fibre Channel Evolution

FIBRE CHANNEL TECHNOLOGY	PRODUCT AVAILABILITY	BACKWARD COMPATIBLE	COST PER PORT
26bit/sec	Now	Yes	\$1,000
46bit/sec.	2004	Yes	\$1,000
8Ghit/sec.	2007	Yes	Undetermined
10Gbit/sec.	2004	No	\$5,000

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There's nothing magical about real innovation, according to Satyam Cherukuri, CEO of Sarnoff Corp. His company, which grew out of the former RCA Laboratories in Princeton, N.J., aims to help its customers create products and services that will disrupt the marketplace with breakthrough technologies or breakthrough pricing. Cherukuri discussed the difference between new ideas and innovation, the methodology of innovation and why hot technologies are not the source of most innovation in the marketplace with Computerworld's Tommy Peterson.

You speak of innovation as a competency you bring to your customer companies. Can you explain? There are broadly two types of innovation. Let's get our definitions straight — the phrase is used in so many different contexts. Businesses innovate and reconstitute themselves by changing their business models. The biggest story in the past 10 years in that direction was IBM. There is another aspect, which is innovation through introducing new products.

Our focus at Sarnoff and our core competency is really the creation of and introducing new product lines into the market. That's the context of innovation I'm talking about. Innovation in that context has often been associated with entrepreneurs who either through their brilliance or serendipity create new ideas, new gizmos, new things, and that's had, in fact, a significant effect on the marketplace. That's the traditional approach to innovation, which is driven by the venture-capital models funding entrepreneurs — all of that feeding into an ecosystem.

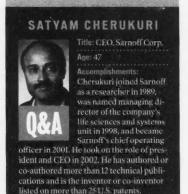
Innovation at Sarnoff is really a methodology. We take the artistic or the "black-magic" aspect out of that process, rationalize it and develop methodologies around it. It's not unusual for the instincts of the individual to drive any particular domain in the early stages of development where all of the forces or factors are not understood. As you understand different phenomena that contribute to successes or failures, then you can develop a methodology around it, which is what Sarnoff has done in the past 15 years.

Is the key to that understanding and innovation being able to break it down into steps? Yes. But I want to separate out continual evolution of the product line from introduction of product lines that create a disruption in the market either through performance or cost or both. It's different from a Chevy owner getting the next model each year or an RCA or Toshiba introducing the next DVD every year. Going from VCR to DVD was innovation. Evolving the DVD product line on a six-month basis is what I call operating evolution.

It's not the idea we're talking about, it's not the research we're talking about — it's introducing a disruptive performance or cost break into the market that causes a disruption in the marketplace.

There are three factors that are always in interplay, and that's why innovation has for the most part been a black art. That term is used by scientists to mean you cannot derive it from equations; it is something you intuit. When you understand things, it's not magic. It's governable; it's manageable.

What are the forces that need to be understood? Innovation is about bringing technology, business model and capital together. Those are essential ingredients, FOR HIRE



necessary but not sufficient. The reason the venture-capital model is optimized for an 80% failure rate is what the VC world knows from experience. Even after they have identified a specific business proposition, because there's a technology risk, there's a market risk, and if they're not dealt with in a timely fashion, you run out of capital. So how you reconcile these in a systematic way is what I'm talking about as a competency.

Are you saying that all our notions of innovation as coming from a flash of inspiration are wrong and that it really comes from knowledge and analysis of the process in the past? When you're just playing with technology, you're too far away from reconciling with the market. You think you're succeeding, but in no context. There's no context to define what success means. You've got to sell a product in the market, and that's really what innovation is all about.

Is there a secret to successful innovation? The key to innovation is having the ability to change the business model at a moment's notice. And the doom of innovation is the opposite — if you're reluctant to change the business proposition, you're very likely to fail.

We are always engaged in development projects in large corporations and in government institutions, and my personal observation is that the single biggest reason for their failure is that they're not willing to change the original objective. Because when the original objective becomes irrelevant -I'm not saying it must become irrelevant, but it often becomes irrelevant - the initial teams lock into them. They're afraid to change those objectives in a timely manner. That is really what leads to running out of capital. You may have the right technology and the right business model in the end, but you didn't change them soon enough before you either ran out of capital or time. Innovation has to be delivered in a timely manner. The window of opportunity and the framework of investment are variables, but necessarily finite variables.

What technologies do you find the most intriguing right now?

I hate to look in my crystal ball, but I suppose it's an amusing exercise. There are a couple of institutions — I don't want to name them because I don't want to offend them — that put out the top IO technologies every year. I've been reading them for the last 30 years. I never see them make sensible projections on anything.

I could talk about how nanotechnology is going to be great, but what I'm saying is that innovation is not that simple. In the innovation game, that temptation needs to be gotten away from. You need to be cognizant of the fact that at any given time, there are a lot of technology forces out there, but never lock in on which one is going to be the next hot one. Keep your options open until you see strong evidence of which way to go. Don't create a business plan with the assumption that nanotechnology is going to be the one, because that rarely works.

There is always a continuing expansion of science and technology, and there is always a continuing expansion of engineering capabilities. From the beginning of mankind, that growth has always been exponential. But innovation is not about science or technology or engineering. Innovation is about reconciling those with the market to create new products. So I don't really care about hot technologies, because business opportunities are always there no matter what the conditions are, and we help our customer find them. On the other hand, if you have a hot technology that gives you a substantial competitive

advantage, go for it. Sarnoff has, for example, the highest power laser ever created. It's still far away from an innovation project, but if we have the science harnessed into innovation, hey, that's going to make us a lot of money. © 45297

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IMAGINE a handheld device that combines the functionality of a cell phone, a PDA, an MP3 player, a digital

camera, a television and a half-dozen other devices.

Whatever the merits of such a gizmo, for the moment at least, building it is still infeasible. The separate microprocessor logic needed for each function would require far too much real estate and energy to fit into anything resembling a decent handheld.

Proponents of a long-held concept called reconfigurable computing think they may have an answer to the problem.

Reconfigurable computing involves processor hardware capable of automatically adapting to changing application needs. Unlike the permanently etched circuitry on current-generation

static microprocessors, the wiring on reconfigurable processors can be redrawn on the fly by software- or hardwarebased microcontrollers, to match the function being performed. By opening and closing the millions of logic gates on such chips, their circuitry can

be changed so as to perform signal processing one instant, for example, and an encryption function the next.

Because reconfigurable computing chips do away with a lot of the redundancy and overhead found on static processors, they also consume less energy while delivering greater speed.

For instance, a single such chip in a cellular handset could configure itself to search for a local base station, then establish its identity on the cell and finally send or receive calls - tasks that today require multiple chips.

"What you are trying to do is to change the hardware to match the problem at hand," says John Watson, cofounder of QuickSilver Technologies Inc., a developer of adaptive computing technologies in San Jose.

Such malleable chips represent a fundamental shift in microprocessor design, says Nick Tredennick, a former microprocessor architect and editor of the Gilder Technology Report in Great Barrington, Mass.

"All the microprocessors that we have today are basically 30- or 40-yearold designs," says Jim Turley, an independent analyst in Pacific Grove, Calif. "We are fundamentally making the same computers our grandfathers did, even though silicon technology has improved dramatically."

Though it might sound radically new, the concept of adaptive computing architectures has been floating around in one form or another for some time. In-

DEFINITION

Reconfigurable

Computing

Chips or systems capable

of modifying themselves,

while running, to meet dif-

ferent application needs

deed, several companies - from relatively unheard-of start-ups such as QuickSilver and Gate-Change Technologies Inc. to the likes of Intel Corp., Motorola Inc. and Infineon Technologies AG - have efforts under way in the area of reconfigurable computing.

For example, QuickSilver offers an integrated circuit technology that dynamically changes at runtime to create the hardware needed for different applications. Someday, such technology could form the basis of a universal cell phone or be used in flexible automotive electronics components, Watson says. Similarly, Intel's efforts in this area include a project to develop software-defined radio that uses software to automatically reconfigure all the hardware logic on a chip, with no mechanical switching of circuitry.

The idea is to eventually build a general-purpose wireless communications

processor that's capable of executing multiple standards and protocols and offers better performance than a dedicated application-specific integrated circuit (ASIC), says Steve Pawlowski, an Intel research fellow focused on reconfigurable logic.

Such efforts have gone commercially unnoticed for a long time, but they're going to be crucial in tomorrow's untethered world, Tredennick says. Conventional processors were designed for systems that were largely static and derived their power from wall sockets, he says. As a result, the focus of most early microprocessor design was on price/performance per unit - squeezing out ever-faster clock speeds from a piece of silicon while keeping unit costs reasonably low.

With the advent of laptops and notebooks, the focus shifted to microprocessor power levels as well, Tredennick says. As more devices start going mobile, there is going to be an even greater focus on price/performance per watt of power consumed, he says,

Fixed-circuit microprocessors are quickly reaching certain physical limits that will make it extremely hard to maintain the power/performance balance for much longer, making reconfigurable architectures inevitable in the untethered world, Tredennick says.

But getting there isn't going to be easy, everyone agrees. In fact, few expect to see widespread use of dynamically reconfigurable chips within five years. Pawlowski pre-

dicts that it will take at least until 2007 for Intel's software radio efforts to become commercially viable. "We have to first prove internally that there is a significant product benefit in terms of costs, power and area. Our mo-

bile power people are expecting longer battery life and the flexibility to handle multiple protocols," he says. "We are trying to find the perfect fit." Also, technologies such as ASICs

> rays (FPGA) already offer some of the same benefits being touted by adaptive architectures. ASICs are special-purpose chips and are more efficient at doing specific tasks than generalpurpose microprocessors.

and field-programmable gate ar-

FPGAs are devices whose hardware logic can be reprogrammed in the field to accept hardware updates or bug fixes. But neither ASICs nor FPGAs offer the flexibility that adaptive architecture promises. Both technologies are also relatively expensive and, in the case of FPGAs, too power-hungry.

Building adaptive chips can also be difficult. Writing the programs that instruct each of the millions of logic gates in such chips to open and close so as to alter the circuitry on the fly can be incredibly complex.

The hardware design tools to do these sort of tasks are only just emerging, Pawlowski says.

Also, Turley says, "most people haven't really wrapped their heads around how to create and manage computers that change on the fly." Nor is there a full understanding of what applications might truly benefit from the approach, he says. For the moment, mobile devices present the biggest opportunity for adaptive computing.

"Someone is going to have to build a very high-volume application for the case to be really compelling," Tredennick says. "Nobody has done anything that is really [commercially] successful" so far. But that could begin changing soon, he says. O 45334

nameleo COMPLITING

JUST WHAT IS IT?

Some vendors define reconfigurable computing loosely:

QuickLink 45447

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Security Tools Search Falls Short

Disk encryption and identity management products on display at the RSA Conference don't quite fit. By Mathias Thurman

RECENTLY attended the RSA Conference in San Francisco, looking for information on encryption and identity management products. I also attended sessions on identity management, vulnerability assessment, security information management and wireless security. All were well attended. On the show floor, meanwhile, many vendors had found a way to put a Sarbanes-Oxley spin on

their products. MANAGER'S One of my focus areas this year is mobile MIRNAL A device protection, particularly disk encryption. I decided that we needed such a product because 20 to 30 mobile devices go missing from my company each year. Most of those are laptops, along with a few handheld computers and BlackBerry e-mail devices.

A few of the company laptops that disappeared last year were assigned to executives and contained sensitive information. In one case, an executive responsible for software engineering lost a machine that contained the design documents for a new product line, as well as employee contact lists, financial reports and merger and acquisition information. All the data resided within an unencrypted directory. In the wrong hands, that data could have had a significant negative impact on our company. In another case, a salesperson reported that a laptop containing confidential price lists and a locally cached customer list had been stolen.

Now I'm looking for an encryption product to deploy

first on the machines of these "high-risk" employees, as we refer to them, with an eve toward potentially installing it on the thousands of machines in use throughout the company. My initial choice is to use the Encrypted File System feature that comes with Windows. Since all of our laptops use Windows 2000 or XP, both of which include EFS, that ap-

proach makes a lot

EFS is fairly easy to deploy, allows for a key escrow capability, includes strong encryption and can be made

seamless to the user. If we want to do so, we can also add two-factor authentication to further improve security. However, standardizing on EFS leaves out other mobile devices.

Finding a single encryption product that can address all of these devices would be ideal. but I suspect we will need to deploy several different ones. Unfortunately, few vendors at the show had products in this area, and I'm not too excited about the products I did see. I'll call in other vendors once I complete my risk analysis.

We needed [a disk encryption] product because 20 to 30 mobile devices go missing from my company each year.

Identity Crisis

I also spent some time with identity management product vendors. Compliance with regulations like Sarbanes-Oxley is a big issue for my company. Identity management tools address the need by controlling access to our many homegrown applications.

About 80% of the applications we run are developed inhouse. Although many are written using a standard platform such as I2EE, authentication, authorization and access isn't standardized. Instead, each application is a separate entity with its own database of users, creating a management nightmare.

Some applications support the financial aspect of our business, which is where Sarbanes-Oxlev comes in. Identity management tools could provide a single point of user and password management, provisioning, access control and authentication for all of our applications.

One control that we might be asked to test is the ability to quickly remove a user's access to specific financial applications. Currently, this process requires access to many applications to ensure that the user's account is disabled. With an identity management system, it would be a one-step

The promise of these tools is that an individual's identity and access rights can be defined and managed from a single point. The vendor marketing made this all sound fairly straightforward, but as I began peeling the veneer off the products, there was a familiar tone to it all.

The state of identity management reminds me of when we first started looking at public-key infrastructure (PKI) about 18 months ago.

Vendors and integrators generated a lot of excitement and made many promises, but when they got down to the details, we found that we could enable only certain aspects of our business for PKI, not everything. Interoperability. resources and cost became issues. It just didn't make sense at the time, so we put it on the back burner and eventually lost funding for it.

Another potential benefit of

identity management is the ability to share aspects of a user's identity between entities, whether they are within the confines of the corporation or between organizations. But this means I must trust the other company with my employee identity information. Vendors call such sharing of identity elements "federated identity management," but they support two competing standards in this area: Web Services Federation and Liberty Alliance. WS-Federation was developed by a group of companies that includes Microsoft Corp., IBM, VeriSign Inc., BEA Systems Inc. and RSA Security Inc. The Liberty Alliance is more of an open-source community project. At this point, I've decided to wait for a clear standard to emerge and for the inevitable vendor shakeout.

Back at the office, the most pressing issue is establishing security standards. Setting application security standards seems to be very time-consuming for us. I'm meeting with development team managers to ensure that what we come up with makes sense and is attainable. I should be done in the next few weeks. Then I can turn to other issues on the project list: patch management, wireless security, vulnerability assessment scanning, personal firewalls and security information management.

WHAT DO YOU THINK?

This week's journal is written by a real security manager "Mathias Thurman," whose name and employer have been disguised for obvious reasons. Contact him at mathias thurman@yahoo.com, or join the discussion in our forum: QuickLink a1590

To find a complete archive of our Security Manager's Journals, go online to Computerworld.com/secjournal

SECURITY LOG

Recommended Reading

Anyone who wants to know more about federated identity management should read the white paper "Liberty Alliance & WS-Federation: A Comparative Overview" at the Liberty Alliance Project Web site You'll find the PDF at Quick-Link a4150.

- Mathias Thurmon

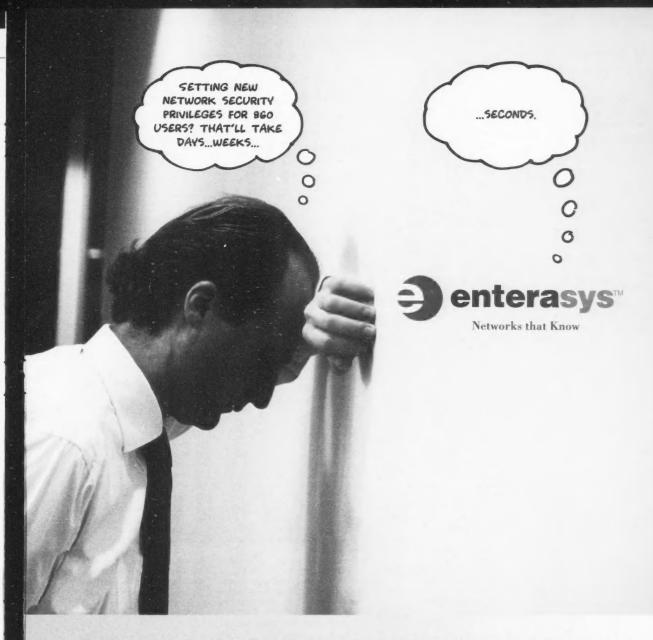
Exploits Target Confidential Data

More exploits than ever are putting confidential user data at risk, according to Symantec Corp.'s recently released "Internet Security Threat Report." The percentage of the top 10 threats attacking user data increased to 77.9%, and the reach of those exploits has increased, with the volume of submissions rising by 519%. Among the growing blended threats are stealing documents, passwords, keystroke and encryption keys, the Cupertino, Calif.-based antivirus software vendor says. The report, which includes a list of the top 10 threats, is posted at www.symantec.com.



NetScreen Updates IDS

NetScreen Technologies Inc. in Sunnyvale, Calif., has announced a new version of intrusion-detection and -prevention software for its Net-Screen-IDP line of hardware. IDP 3.0 includes features for analyzing network and application traffic, thwarting Internet worm outbreaks and spotting rogue applications. The software, which ships in early April, will run on the full line of NetScreen-IDP products.



These days, no network is free of threats. That's why you have to assign network security privileges to everyone. Employees, customers, and partners. You need to set an acceptable use policy that dictates what each of them can and can't access. Until now, you had to do this manually.

Not anymore, Now you can do what Baylor University did. Implement an Enterasys Secure Networks[®] solution with a unique, policy-based system that empowers the network to allocate resources based on specific users and their roles. The network "sees" who the user is and assigns privileges accordingly. This improved control also gives you more security.

It's all about giving you a smarter way to network with central, intuitive management. Find out more at networksthatknow.com/Baylor. Or ask any one of the many enterprise customers we've worked with for years.

BRIEFS

NetIQ Launches AppManager Beta

NetIQ Corp. in San Jose has announced a beta version of Net AppManager 6.0, which is designed to enable IT groups to manage service delivery to internal users in networks and systems. It is also able to measure compliance with service-level agreements. The beta version of Net AppManager 6.0 is available now; the product will be generally available before July. It is priced at \$2,500.

Red Earth Boosts Policy Patrol

Red Earth Software LLC in Portsmouth, N.H., announced Policy Patrol Version 3.0, a set of software products for e-mail filtering. New features include improved spam protection through Bayesian filtering, remote image detection and word-pattern matching. Policy Patrol Enterprise includes content checking and attachment blocking. Pricing ranges from \$95 to \$395 per 10 users.

IBM to Sell Opteron Workstation

IBM in May will sell the Intelli-Station A Pro, an Opteron-based workstation, with pricing starting at \$2,619. IBM will load Red Hat Enterprise Workstation 3.0, which will support 32- and 64-bit applications, on the workstation if needed. It will also support SUSE Linux and Microsoft Windows.

Veritas Upgrades Storage Software

Veritas Software Corp. in Mountain View, Calif., announced it has upgraded its Cluster Server and Volume Replicator storage software products, integrating them as a disaster recovery suite. Both offer the ability to fail over applications and replicate data over an IP network. Cluster Server 4.0 starts at \$2,995, and Volume Replicator starfs at \$4,495.

TOMMY PETERSON

IT Must Earn Respect Anew

HE CEO OF A software company told me recently that the "defensiveness" of IT organizations is one of the most pervasive problems in the industry these days. It undermines their standing within their companies and reduces their influence in decision-making.

He asked me not to attribute the comment to him because "the last thing those people want to hear is some vendor suggesting they've got a bad attitude."

That CEO is not alone in noting that something has gone sour in IT's relationship with both the business side and users. The barely veiled hostility between IT groups and the folks who sit on mahogany row and in the cube clusters has become a com-

mon topic of conversation.

There are good reasons for IT workers to be edgy. Those whose jobs haven't been eliminated or sent overseas are working harder with smaller budgets — and they're getting a lot less respect for the work they do. It's the respect factor that may be the crux of the issue.

Several years ago, I worked in the headquarters of a large newspaper chain. The IT staff had convinced management that physical security for the computer room was crucial, and they had sequestered themselves away in a windowless corner office, barricaded by a reinforced door with a combination lock.

They ventured out of their fortress only to chastise us users about cyberhygiene and to restart applications that had been fouled by stupid-user tricks. We viewed them as eccentric, and they irritated us with their arrogance. But they knew things we didn't, and in truth, they saved our butts



nology editor. Contact

her at tommy_peterson@

more times than we liked to admit.

At one point, upper management began huddling with the in-house geeks and a gaggle of consultants, trying to choose a new "front-end" system—although we doubted the execs actually knew the difference between a front end and back end.

Management even hired a vice president charged

with developing our online operation. It seemed that the geeks were going to rescue our content from legacy media, too.

But it didn't quite work out that way. The vice president lost his job in a round of downsizing. The fortress was dismantled when half the building was leased to another company. The IT staff now runs itself ragged maintaining the operation and searching out troublesome rogue applications that have been installed by users who have become too smart for their own good.

In that business, as in many others, IT has been demystified both by a simple process of increasing user familiarity and by design, as complex technology has been pushed down through organizations. The IT department is no longer populated by the keepers of arcane technical secrets; it's a support service.

At the upper-management level, technology is no longer an adventure — CIOs had better be able to prove that the IT strategy lines up with the greater business strategy of the company, or they won't be around very long.

This is a natural progression as the industry matures, but that doesn't make it any easier to swallow for the people whose status has declined as the uncertainties of their jobs have escalated.

In many cases, IT's response is, well, defensiveness. When I returned to the newsroom the day I spoke to that CEO, I checked the Computerworld Web site for coverage of our Premier 100 conference. There I found a description of the verbal sparring between Bob Metcalfe, father of Ethernet and defender of the IT faith, and Nicholas Carr, author of the infamous "IT Doesn't Matter" article that appeared in the Harvard Business Review last May. Metcalfe's spirited and witty defense of the industry [QuickLink 45332] was no surprise, nor was Carr's slightly peevish but exceedingly lucid defense of his contention that IT can no longer offer companies a competitive advantage.

The surprise came in the intensity of emotion demonstrated by the IT executives in the audience. They kept the debate going with comments and questions half an hour over its allotted time, and many in the crowd were clearly very angry at Carr. Despite the provocative title of his article, Carr acknowledges that IT is absolutely essential to modern business — it's just not going to drive the business models of non-high-tech companies.

IT is used to leading the parade. Yet it will earn back the respect it has lost only by making the adjustments needed to march in step with the rest of the band. © 45517

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MANAGENE NENT

Play War!

War games can make strategic planning come to life. Companies can simulate business moves — such as strategic IT investments — as well as competitors' countermoves. Page 42



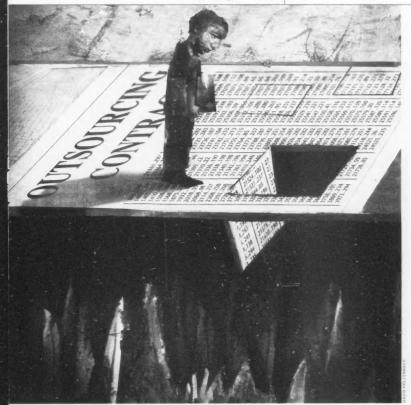
Career Watch

Vince Campitelli describes the work of IT auditors at Wachovia Corp. and gives career advice for IT professionals considering a move into IT auditing. Page 44

OPINION

The Case for IT Leasing

Are you sure you want to purchase that new computer? Norbert Kubilus says today's flexible leasing deals can be a very attractive way of turning over some IT risks to the leasing company. Page 45



O A CIO, OUTSOURCING contracts may look like other procurement and service agreements, but they're much riskier. "You're writing a contract for a service that's impossible to describe, that will change over time and need to be renegotiated, that will make you dependent on the service provider and for which termination is not an option," says Paul Roy, a partner at Mayer, Brown, Rowe & Maw LLP in Chicago, who has put together some of the largest outsourcing deals in history. "That's not an ideal negotiating position," he adds.

Roy and other attorneys who specialize in outsourcing have seen the challenges CIOs face when they sit down to negotiate outsourcing deals. Here's some advice on gotchas that can undo the unwary:

PROBLEM: Unresolved issues. Amid the pressure to get the deal done, the outsourcer may push you to sign before pricing or service levels are nailed down, promising only minor adjustments later. "The supplier may say, "This is standard; we do this all the time," "says Bob Zahler, a partner in the outsourcing practice at Shaw Pittman LLP in Washington." But in our experience, in every case that has produced a bad result."

SOLUTION: "It's much better to resolve those things beforehand, even if it means delaying the signing," Zahler says. It takes many months to put together an outsourcing deal, he adds, so if you know you don't have sufficient data to establish service levels or pricing, start measuring immediately.

Hidden traps lurk in every outsourcing contract. Here are 12 BIG ONES – and how you can avoid them.

OUTSOURCING BY KATHLEEN MELYMUKA

OUTSOURCING

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PROBLEM: Fixed service levels and incentives can become antiquated over time.

SOLUTION: Design the agreement to be flexible so you can add and remove service levels and set incentives so you can move from one service level to another, says Roy. Include a mechanism that allows you to ratchet up service levels to keep pace with the market, focus on things that create business value and adapt over time.

PROBLEM: Fuzzy scope. The standard contract has voluminous descriptions of scope of service — often in excess of 100 pages, Zahler says — but they're written by technical people who aren't as precise and detailed as they should be. "And clients don't read them," he adds.

SOLUTION: Zahler's firm breaks IT into 77 detailed processes based on industry standards and creates a matrix with processes down the left side and the client's description of his IT group across the top. Then they color-code supplier and customer responsibilities. "It's easier to do a contract that way and it gets clients to focus on scope of service," he says.

PROBLEM: Tasks missing from scope. No matter how careful you are with the scope of work, you'll miss something, and that can cost you more, Roy says.

SOLUTION: Build in a "dragnet" clause that states the following:

■ The outsourcer will do everything your staff did over the preceding 12 months, even if you neglect to list it.

The outsourcer commits to perform the function as it's performed in the market, recognizing that things will change over time.

PROBLEM: Exclusivity. In order to get economies of scale, critical mass and broad integration, the outsourcer will want the exclusive right to perform the functions in the contract. "But think very carefully about this," Roy says. "Not all suppliers have equal capability in all functions. This is one of the biggest problems we see."

SOLUTION: Retain the right to perform the function in-house or send it to a third party. Roy says. This right allows you to maintain competitive pressure on the outsourcer and test service levels in categories where there may be problems. If the outsourcer is weak in one function or region, you can take back that piece or give it to someone else. "Where you have multiple outsourcing agreements, over time you may find that what you've outsourced to one supplier really fits better with another," Roy says. "This enables you to reorganize the matrix of outsourcing functions."

PROBLEM: Damages waivers. The outsourcer wants to cap reimbursements for direct damages—out-of-pocket expenses you pay because of its failures—and completely waive indirect or consequential damages, such as lost profits or a decline in stock price, as a result of such failures. "That means if you outsource the call center and the vendor messes up and you lose \$10 million in profits, if it didn't 'cost' you anything, you would have essentially no re-

WATCH WHAT YOU WISH FOR

IN THE "HOT FLUSH OF ROMANCE," both parties want to get the deal done and see the benefits as soon as possible, says Gregg Kirchhoefer, a partner at Kirkland & Ellis. "It's hard to think of the negotiation process as anything other than a hindrance," he says. But try to view it as an opportunity to identify problems, deal with those issues and lay the foundation upon which the relationship

can grow and prosper in the long term.

There's a certain adversarial element to any contract negotiation, but don't get so tied up on gaining the upper hand that you blow the long-term benefits for short-term advantage. "Be careful what you ask for, because you just might get it." Kirchhoefer says. An outsourcing arrangement is like a three-legged stool: scope of services, performance and price, he explains. "If you lengthen or shorten one, the rest gets out of balance." he says.

Realize that both parties have legitimate interests, and fashion a contract to build and foster the relationship, he says. "Otherwise, you may win the negotiation but create a dynamic that's a disservice to what you're trying to accomplish, a breach waiting to happen."

- Kathleen Melvmuka

course," says Brad Peterson, a partner in the outsourcing practice at Mayer Brown. "It is one of the most dangerous provisions."

SOLUTION: This is difficult to work around, Peterson says, but three tactics may help:

■ Try to negotiate the cap on direct damages as high as possible. The outsourcer will want to limit it to one to three months' revenue; try for 12 to 24 months. "Get the number high enough to provide a meaningful remedy." Peterson says.

■ If you must waive indirect damages, demand as many exclusions as you can. For example, retain the right to indirect damages if the outsourcer fails to provide termination assistance or if your company is sued for intellectual property infringement based on software the outsourcer is using.

Make sure the contract defines specific amounts the outsourcer will pay if it fails to perform.

PROBLEM: Decreasing costs. Technology costs—especially in areas like telecommunications—can decline dramatically over time, but an outsourcing contract can span five to 10 years. How do you avoid overpaying?

SOLUTION: Write short-term contracts for the most volatile pieces, or allow the outsourcer to provide the service on the condition that it passes through to you any cost reductions from its supplier on a dollar-for-dollar basis. (You can require the outsourcer to disclose its costs or certify when it has renegotiated.) "The supplier keeps the margin, but they don't get a windfall, and this allows you to get into a longer-term contract," Roy says.

PROBLEM: Benchmarking can be ineffective

in complex outsourcing deals because it's very difficult to find comparable situations at other companies.

SOLUTION: Benchmark the prices of individual components and regions, Roy suggests. For example: How much are you paying for application programmers in India compared with the competition? Keep in mind that this type of benchmarking requires the outsourcer to charge a straightforward amount for each component. That means no cross-subsidizing (subsidizing an expensive element in the contract — say, mainframe maintenance — by raising profits on another element, such as applications development).

PROBLEM: Lock-in. For business reasons, you may need to terminate the outsourcing contract for convenience — that is, without a failure or breach from the outsourcer. But the fee can be prohibitive. SOLUTION: Outsourcers try to set a termination-for-convenience fee as high as possible to lock you in, says Peterson, but be sure it's low enough that termination remains an option.

PROBLEM: Ownership of intellectual property developed in the course of outsourcing is always in contention. You want to own what you've paid for. The outsourcer wants to own what it has developed.

SOLUTION: Focus on whether the application is strategic to your business, says Gregg Kirchhoefer, a partner at Kirkland & Ellis LLP in Chicago. If an application isn't strategic, let it go, but you may want to negotiate some return on that investment in terms of royalties or other compensation.

PROBLEM: The outsourcer's people are critical because of the close interaction between supplier and customer, but you have to cede control of personnel.

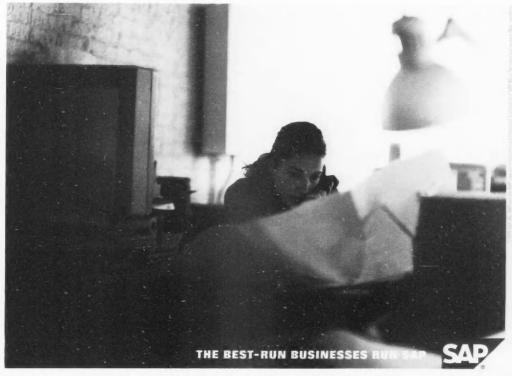
SOLUTION: Retain the right to approve six to 12 people in certain key positions who solve problems and interface with management, such as project executives, help desk managers, systems architects and software troubleshooters, Roy says. Get commitments that those people will stay on for a reasonable minimum time and, when they do leave, that you'll interview and approve their replacements. Retain the right to request reassignment of people who don't work out and to hire the outsourcer's staff at the end of the deal.

PROBLEM: Ignoring termination issues. In the eagerness to get the deal done, people often pay insufficient attention to termination, causing trouble later.

SOLUTION: Focus on what should happen under various circumstances: termination at the end of the contract, termination for cause or termination for convenience. Carefully consider the rights and responsibilities of each party in each circumstance, and be sure the contract reflects that, says Kirchhoefer.

"When [termination] happens, the parties won't be talking as much and won't be as interested in helping each other out," he notes, "so you want to have clearcut rules." © 45017

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the threat until it was too late. For years, the cyberat-tacks came, increasing in so-phistication and growing in the damage they did to the U.S. economy and to certain targeted industries in particular. Just when the nation was awakening to the nature of the threat — thanks to a defector from the enemy side — the enemy country switched to bioattacks. Like the cyberattacks, these were hard to pin down. (That outbreak of mad cow disease was an accident, wasn't it?)

So clever were the attacks that in most cases, U.S. officials didn't know just where they were coming from. As a result, their foreign policy toward the originating country was wholly inappropriate: They spent billions on weapons to defend against a military threat, when in fact the opposing country was hellbent on economic warfare.

Fortunately for the U.S., this isn't a true story. It's a brief summary of a two-day war game that played out recently in Newport, R.I. Put on by the military strategy experts at Alidade Inc., the game pitted a Blue Team (the U.S) against a Red Team (an Asian country, perhaps China). The players were mostly military types hoping to hone their strategy skills, but some players, including this reporter, were there to see how war-game concepts might be applied in the commercial world.

The teams began by deciding how to spend their military budgets — \$300

PLAY WAR!

Strategic planning comes to life when war games are used to simulate business moves – such as IT investments – and countermoves.

BY GARY H. ANTHES

billion for Blue, \$30 billion for Red—and over the course of five moves, each one covering a period of five years, Blue and Red took turns acting and reacting with various military and foreign-policy actions. For example, when Blue and Orange—Orange is a country in Red's region with close economic ties to Red—agreed to a joint military exercise, Red saw it for what it

was: a naked attempt by Blue to exercise influence in Red's back yard.

The Red Team, meeting in a hotel conference room next to Blue, considered six responses, including doing its own military exercises with Orange, funding massive high-tech economic development in Orange and threatening nuclear proliferation in the region.

Red ended up making only token

moves in any of those directions. Instead, it focused on beefing up its cyberwar capabilities, both offensive and defensive, while making various cosmetic overtures to Blue, such as proposing to establish joint projects in biotechnology, ecology and IT.

Red Team Commander Scott Borg, a senior research fellow at the Institute for Security Technology Studies at Dartmouth College, describes Red's winning strategy this way: "We knew Blue wouldn't attack us, and we knew we couldn't win any military conflict with them. So we made it an economic war." Although Borg conceived of most of Red's ideas, he nevertheless learned something new from them. "It will keep me awake at night," he says. "It's made me realize all the things a Red Team really can do."

Mismatched Moves

Jeffery Cares, president of Alidade and a self-styled "military innovation expert and naval futurist," says teams in war games often misread each other and respond inappropriately. "Often Blue plays A/counter A, while Red plays D/counter D." That's what happened in this game.

And that's what often happens in the corporate world, where companies with entrenched strategies — reinforced by success — fail to anticipate out-of-the-box competitive moves. For example, IBM in the 1970s failed to foresee competition for the mainframe.

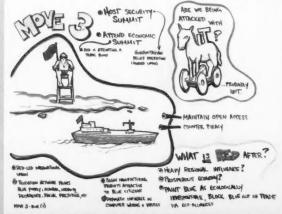
War games can be a uniquely effec-

RED TEAM ©BLUE TEAM

Professional illustrators from Alphachimp Studio Inc. worked in real time throughout the two-day war game to chronicle the strategies, moves and countermoves of the Red



In Move 2, Red considers and takes a number of options aimed at giving the appearance of cooperation with Blue while overtly and covertly competing economically.



In Move 3, Blue still has trouble understanding the economic and cyber war game that Red is playing.

tive way for corporations to do longrange planning for investments, including IT investments, says Paul A. Strassmann, a lecturer in national security studies at Syracuse University and a Computerworld columnist. "I am a strong believer that war-gaming will displace much of what these days is called corporate strategic planning," he says. Strassmann is a former CIO at several Fortune 50 companies and a

former member of the Pentagon's war-gaming simulation review board.

The time has passed when IT can justify its budget solely on the basis of its contribution to the efficiency of the corporation, Strassmann says. It must now work at a more strategic level. "Global competition is now conducted in terms of commercial information warfare, and IT is a weapon of choice," he says. "So competitive planning in the commercial sector really becomes war-gaming. Then the question is, Will the CIO get a seat

at the table when the game is played?"
Virtually all companies do longrange planning. But doing "what if"
speculations with co-managers around
the boardroom table doesn't produce
the kinds of insights and discoveries
that players say can come out of a formal war game. "The worst thing that
can happen in strategic planning is that

the boilerplate plan from last year is dusted off, the blanks are filled in, it's distributed, and people immediately file it on the shelf next to last year's plan," says D. Scott Frondorf, president of Nextscale Inc. in Cincinnati and a member of the Blue Team in Newport.

"You have to do something that brings the strategic plan to life," Frondorf says. "You have to give it character and a space in which to operate. Something

"The secret of its

great power lies in the existence of the

enemy, a live, vigorous enemy in

the next room

walting feverishly to take advantage

of any of our mistakes, ever

ready to puncture

down to earth."

CAPT. WILLIAM

MCCARTY LITTLE U.S. NAVY 1912

y visionary me, to haul us like a war game does exactly that. In fact, it could be a test for the boilerplate plan."

Testing the boilerplate is just what a major manufacturer did in a recent war game, Strassmann says. The game pitted a Red Team, consisting of managers who had put together a traditional five-year plan, against a Blue Team of lower-level line managers responsible for making the plan happen. Perversely, this arrangement forced those who had developed the plan to attack the company trying to live by it.

"The result was counterintuitive" for the participants, says Strassmann, who moderated the game. "At the end of the game, everybody said, 'Hell, we didn't know this.' "

"The top management that prepared the plan had never walked the shoes of the other guy," Strassmann says. "Now that they had Red shoes on, they saw the vulnerabilities of the Blues and "We did some hoopta," says former CIO and IT strategist Paul A. Strassmann, who moderated a recent war game at 3 major company he won't name. "We dressed the Red Team in East German surplus uniforms. The game was held off-site, and because this was war, everybody had to show up at 6:00 a.m. The Reds went in one bus and the Blues in another, and the Red bus played German mili-

"A war game is really a psychological thing, a dramatic exercise," Strassmann says. "People get very upset."

they said, 'We are just going to take them to the cleaners.' "

The game helped the company realize it had an ace in the deck all the time, Strassmann says. "The ace was one of many projects pursued on an exploratory basis in advance engineering. The game moved the project high on the list of priorities and accelerated deployment. This turned out to be a great success in gaining market share."

This particular game focused on product development and marketing and not directly on IT issues, but the CIO did participate, Strassmann says. "The CIO gained enormous under-

standing of the marketing issues, and I understand he subsequently reallocated some of his priorities," he says.

Jack Reader, a senior business development manager at Cisco Systems Inc., attended the Alidade war game and says the concept could be applied internally for long-range planning. "But no one here has bought into it yet," he says. "These out-of-the box things take a while to find the right sponsorship at a big company like Cisco."

Reader says war games are well suited to corporations faced with making expensive and complicated long-term technology choices. For example, he says, a CIO at a small bank might adopt he role of a Red Team against a larger competitor's Blue Team or, if the CIO works for a dominant bank, it could play the role of Blue against smaller competitors playing Red.

"What would you do if your CFO came down the hall and told you your IT budget had been cut 80%?" Reader says. "As it turns out, there are some pretty decent strategies when you are the small guy. It's less brute force; it's about beine smarter."

Alidade likens its war games to "exploring the landscape." Now, having played the game, Frondorf agrees. "A war game forces you to think through the scenario and create what I call 'trail heads,' places that mark pathways to explore," he says. "I like to say that everything interesting happens at the boundaries. In IT, that's especially true." @45012

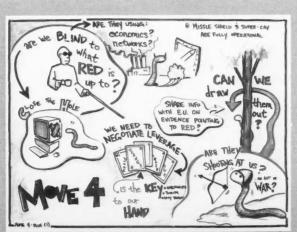
TOIL TO BLUE

BELLE

STANKES

TOURISH THE STANKES

Meanwhile, Red considers a rich array of military and economic options - both overt and covert - and continues to keep Blue off balance.



By Move 4, the Blue Team senses that it isn't in control of the game and is confused as to what Red is up to. Blue now sees the struggle as mostly an economic one, but its discovery has come too late.



Finally discovered in its cyberattacks, Red switches to untraceable bioattacks while simultaneously building defenses against Blue incursions into Red's region.

Career Watch

Think Small

Full-time job growth continues to disappoint economists, financial analysts and, most of all, job seelers. But that's not to say there isn't any IT contracting work out there, says Michael Alter, president of SurePayroll Inc., a Skokie, Ill.-based payroll outsourcing company.

SurePayroll's client base comprises 11,000 small companies, which Alter says are hiring IT contractors at a greater rate than ever before. For the 2003 tax year, the number of Form 1099 wage statements – the ones issued to freelance and contract workers – rose 1296 among SurePayroll's client companies. "A lot of this contracting is for IT," Alter says. "Small businesses are realizing they can get access to a tremendous number of highly qualified people with specialized skills who have been laid off by large companies. On average, small companies can and will hire 10 programmers to d 10 specialized projects, rather than a single \$100,000-a-year programmer."

For the month of February, the latest period for which statistics are available, U.S. payrolis outside of the farm sector grew by just 21,000 jobs and the unemployment rate held steady at 5.6%. In January, 97,000 jobs were added to the economy.

- Julia King

Vince Campitelli



Inte: Managing director, enterprise technology audit

Company: Wachovia Corp., Charlotte, N.C.

What he does: Leads a 60-person audit team focused on identifying and man-

aging risks associated with the use of IT at the \$2.4 billion bank, the fourth-largest in the country. In banking and linancial services, 70% to 80% of all risk is technology-related, because IT is so pervasive in the business. Campitelli believes the need for IT risk auditors is growing in other industries as well, as all companies become subject to new regulations, such as the Sarbanes-Oxley Act and the Patriot Act.

What does an IT risk auditor do exactly? It

entails looking at everything in the technology infrastructure – networks, operating systems, program change controls, disaster recovery, information security, LANs, WANs and voice networks. You assess the risks of all of these technologies and the way they are being managed. Then you develop at three-year audit plan under which you'll look at every component in the architecture, looking at the high-risk technologies every year and the medium-risk items every other year or third year. It's like sampling New York City restaurants. You never get finished because by the end of the first year, you have changed the infrastructure so much that you have to sample more things.

What kind of skills do you look for in an IT auditor? These are hard-core technology people. They understand Unix, firewalls, networks and operating systems, and they understand them from a risk and control perspective. They don't need to be Java programmers, but they need to understand how to control Java programs and best practices for developing, inventorying, testing and rolling out changes.

What's your career advice for an IT professional looking to move into IT auditing? The No. 1 quality you need is professional skepticism. You believe everybody and trust no one. It's also all about communication. IT auditors are focusing on new products, new services and new projects. They need to make sure the CIO understands the risk and has a good way of managing it. In my opinion, risk and understanding risk is a major black hole. What's needed is a good dialogue between business management, IT personnel and IT auditors. You have to come up with a common language that all people understand.

How do you do that? Have a good training curriculum for IT people. For new IT hires, we build in an appreciation for risk and risk assessment controls into the core training. The other thing we do is get senior people to fully support it. That then significantly reduces the challenge because brandnew people are all for it. **© 45276**—Julia King

Double Vision

Business and IT executives don't see eye to eye on where their problems lie.

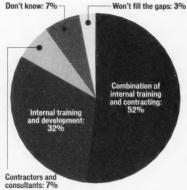
Which IT skill sets are lacking in your IT organization to the point where it threatens success in 2004?

STATE OF THE STATE	Business	п
Speed and customer responsiveness	33%	28%
Project management	33%	26%
Leadership/change management skills	30%	25%
Strategic thinking	35%	22%
Analytical thinking	25%	17%

Base: 818 senior executive decision-makers at North American companies multiple responses allowed

SOURCE FORRESTER RESEARCH INC. 2004

How will you make up for your shortfalls of IT skill sets in 2004?



Base: 364 North American decision-makers (Percentages don't total 100 due to rounding.)

Numbers

Percentage of IT executive jobs filled via pee networking.

> Percentage of IT executive jobs found by direct contacting company executives.

Percentage of IT executive jobs found throug online job boards.

Percentage of IT executive jobs found through company Web sites.

Minimum number of hour a full-time job seeker should spend searching each week.

Minimum number of wee ly networking meetings to include in the search

BRIEFS

Retailing CIO Now CTO at Newgistics

Austin-based Newgistics Inc., which helps direct retailers handle returned merchandise, last week named Joe Phillips as chief technology officer, reporting to the CEO. Phillips previously held CIO positions at Blockbuster Inc., Eckerd Corp. and Rite Aid Corp. He holds a bachelor's degree in math and physical science from Troy State University.

Unova Taps Taylor For IT, HR Roles

Unova Inc., a mobile and wireless systems company in Everett. Wash., last week named Sue Taylor as CIO and vice president of human resources. Taylor previously served in those dual roles at Intermec Technologies Corp., which is Unova's automated data systems division. Her previous positions at Intermec included IT director of global systems, director of global telecommunication and client services, and leader of the company's custom software development. Taylor holds a master's degree in business administration from the University of lowa and a bachelor's degree in business administration.

Trash Hauler Names New CIO

Waste Management Inc. in Houston recently named Lynn M. Caddell as senior vice president and CIO. Caddell will succeed the company's former CIO, Tom Smith, who retired March 8. Caddell will lead a group of more than 400 IT professionals and report to the CEO. Caddell will join Waste Management from Yellow Technologies Inc. in Overland Park, Kan., where she has served as president since November 1999. Caddell holds a bachelor's degree in history from Jacksonville University and a master's degree in systems engineering from the University of Arizona. She also completed an executive education program at Harvard University.

NORBERT J. KUBILUS - PEER TO PEERS

The Case for IT Leasing

O LEASE OR NOT TO LEASE? That's the question facing many IT executives today as they grapple with justifying the expense of technology investments. All indications are that corporate capital commitments are on the upswing, especially in the area of IT purchases. With interest rates rivaling those of the 1960s, there's a strong temptation to buy new

NORBERT J. KUBILUS is a

Partners in San Diego.

He can be contacted at

Norhart Kuhilonik

hardware and software. But how wise is it to purchase the new technology? Rapid obsolescence of technology is a serious problem, especially for companies that have a strategic need to keep pace with changing technology. Such large capital expenditures require a major cost-justification effort and make it harder for companies to conserve working capital.

When a business purchases computer equipment, the typical financial

assumption is that the equipment has a five-year life span. It becomes a capital asset of the company that depreciates in value over the five-year period. After three years, 40% of the equipment's value is still on the company's books, but there's little technological value left in it. This value gap is the key reason for interest in IT leasing.

Operating leases are quite attractive for IT because they treat computer hardware and software as expense items, like a company does for commodities such as disks and printer paper. The short-term monthly cost of IT leasing is always significantly less than that of borrowing the money to buy the equipment. For the same computers worth the same amount, over the same term and for the same down payment, monthly lease expenses will be

30% to 60% lower than loan payments, even at today's best interest rates.

During the first three to five years of the equipment's life, the overall cost of leasing compared with buying is approximately the same, assuming the financing deal in each case runs the same length of time and the company sells the equipment at the end of the loan.

Some lease-vs.-buy comparisons show that buying costs slightly less than leasing does, but this is based on the bad assumption that purchased equipment will return full market value if it's sold or traded at the end of the loan.

While there is a secondary market for used computer equipment - just look on eBay - it takes time and effort to obtain full market value when disposing of computers by the hundreds or thousands. The hassles of managing obsolescence and disposal will make leasing seem a lot more favorable. The leasing company assumes both risks.

The CIO should look for a properly structured leasing program that offers more than just cash-flow benefits and technology risk avoidance. A key feature of such a program is effective asset management. The leasing company owns the equipment and is responsible for maintaining the physical inventory for each piece of equipment on lease, including a description, serial number, asset tag number, acceptance date, installed location and lease termination date. It also collects and pays sales taxes, use taxes and/or property taxes based on where the equipment

Leasing programs can be very creative and customized. A typical program involves a master lease with schedules that permit timed acquisition of equipment from multiple vendors. The phased acquisition could be especially useful for, say, a gradual rollout of point-of-sale systems at hundreds of outlets around the country. Some leasing programs also incorporate a lease line of credit that lets the CIO add hardware and software as needed and incorporate them into the program.

From a return-on-investment perspective, the CIO can also use a master lease to fix per-seat costs on an ongoing basis. This allows the CIO to keep the company at an appropriate level of technology for a predictable monthly cost that can be budgeted in advance. Also, services can be bundled into monthly lease payments. The master lease can cover upfront consulting and training costs, as well as those for monthly support and maintenance

For CIOs who are convinced that hardware and software are commodities rather than capital assets, leasing makes more sense than ever. And the flexible and customized leasing options available today make it an even more attractive alternative. O 45412

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Amtrak

aren't screened against any DHS terrorist watch-list database.

Amtrak declined to comment on what, if any, security measures beyond bomb-sniffing dogs have been deployed to protect the rail system.

But technology and security analysts said there are ITbased systems available today that can substantially improve Amtrak's security in the near term without having a negative impact on passenger movement and convenience.

For example, a \$4,000-percamera license from Reston, Va.-based ObjectVideo can provide security managers with software that lets them set rules for detecting suspicious behavior using existing security cameras. The company just last month signed a distributor agreement with

Madrid-based IT Deusto, and the Madrid metro system is now planning a pilot project using the software. Since the attacks in Spain, a demonstration of the technology during a U.S. embassy-sponsored technology expo scheduled for next month in Madrid has been sold out, according to ObjectVideo CEO Raul Fernandez.

"The problem with large closed-circuit television infrastructures is there are a lot of cameras, but nobody's watching them," said Fernandez. "That's where technology comes in." Had ObjectVideo's software been deployed in Madrid, it would likely have been able to detect the bombers leaving backpacks behind and would have automatically dispatched security personnel to investigate, he claimed.

For remote areas of the U.S. rail system, Axis Communications Inc., a Lund, Swedenbased surveillance firm, has

developed a "network camera" system that can be operated over a company's existing IT infrastructure or the excess fiber-optic cable that typically runs alongside U.S. railroad corridors.

Fredrik Nilsson, CEO of Axis, agreed that most security cameras aren't monitored. "You need to have enough intelligence built in so that the cameras that are being watched are the ones monitoring areas where something is happening," he said.

The company has integrated video motion-detection technology into each network camera and can combine timestamped recordings with physical security events to give security managers "context," said Nilsson. Alerts can then be sent in the form of text messages to cell phones or emails with images attached.

"But kids spray-paint and disable security cameras all the time," said Ken Barney, a



AMTRAK claims to have beefed up electronic monitoring of bridges and tunnels in the aftermath of the Madrid terrorist attacks.

transportation security consultant at Plano, Texas-based Electronic Data Systems Corp. "So the other way to do it is to place a forward-looking sensor on the vehicle to look ahead." Barney said that adding an alert mechanism similar to the General Motors

Corp. OnStar system used in automobiles would be easy to do immediately and would provide a critically needed alert mechanism for emergencies in remote regions.

Barry Ptashkin, a railroad security analyst at EDS, said networked forward-looking sensors or track sensors that include GPS- and RFID-based tracking systems could help improve security in the near term. While those technologies are widely used by freight trains, they're not typically in use for passenger trains, Ptashkin said.

"Once this data is captured, it can be integrated into a uniform format and brought into a data warehouse that would give quick indicators of highrisk areas or key performance indicators and patterns that require investigation," said Ptashkin. "Even if it's limited, it's important to just start the concept and keep it moving." O 45590

Continued from page 1

Risk Index

firmed that the GSC is working on delivering the framework and said it will be available by this summer.

All of the Big Four accounting firms were unable to provide comments on their participation by press time.

"[The RPI] will allow thirdparty auditors to come in and make a judgment as to whether or not you are complying with established cybersecurity practices," explained Larry Clinton, chief operating officer at the Internet Security Alliance. ISA members that score above a certain level on the RPI could qualify for lower insurance rates.

The Arlington, Va.-based ISA is a collaborative effort between the CERT Coordination Center at Carnegie Mellon University in Pittsburgh and the Electronic Industries

Alliance, a federation of trade associations.

Robert A. Parisi Ir., senior vice president and chief underwriting officer for AIG's eBusiness Risk Solutions group, said he wasn't aware of the specifics of the arrangement with the ISA. But ISA members assessed by means of tools such as the RPI will be viewed as "highly desirable risks and ones that we want to price in a highly competitive fashion because we view

When you have all of the big accounting firms applying a certain standard, it carries a certain amount of weight.

ROBERT A. PARISI JR., AIG INTERNATIONAL INC.'S EBUSINESS RISK SOLUTIONS GROUP them as doing the right thing," Parisi said.

"This is an attempt to come up with a kind of universally agreed upon set of values and benchmarks that can be applied across industries" for measuring a company's exposure to cyber risk, Parisi said. "When you have all of the big accounting firms applying a certain standard, it carries a certain amount of weight," he added.

The relative lack of broadly applicable quantitative riskmeasurement tools for the critical infrastructure and for enterprise IT has been a longlamented issue among security professionals.

There are standards such as the ISO 7799, ISO 1799 and those from the National Institute of Standards and Technology that are currently used by organizations as benchmarks and assessment frameworks. But there are few widely accepted standards that are

comparable to the generally accepted accounting principles and generally accepted auditing standards that auditors in the financial services industry are able to use, Parisi said. "At the moment, there really isn't an equivalent to that when it comes to information security."

Formidable Challenges

Developing a framework such as the RPI is highly desirable but could be a huge challenge, users said. For one thing, it's extremely hard to model risk when it comes to cybersecurity, said Robert Garigue, chief information security officer at Bank of Montreal.

"When we are looking at events and the predictability of good or bad outcomes in cyberspace, we don't have much historical data to look at," Garigue said. It becomes extremely hard, for instance, to predict with any kind of validity the number of virus attacks that might take place over the next year, especially in an environment where the technology and application infrastructure are changing so rapidly, he said.

"It is very difficult to do because every network is different," said Dennis Treece, director of corporate security at the Massachusetts Port Authority in Boston.

Mergers, acquisitions, upgrades and a lack of standards in purchasing over the years have contributed to a situation that makes quantifiable risk assessment difficult, Treece said. "It is nearly impossible to make any valid assumptions beyond 'We're a Microsoft shop' or 'We're mostly switched or the like," he said. O 45597

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RFID Kick-start

ORRYING ABOUT RFID? Now's a good time for it.
Really. And not just because the topic of radio frequency identification tags is hovering like a dark cloud over your IT shop. Last week at the big CeBIT trade show in Hanover, Germany, dozens of vendors were showing RFID-related products — including cell phone maker Nokia, which announced an add-on kit for people who want to use their Nokia phones to read RFID tags.

Which means RFID is now officially mainstream. And learning RFID on the cheap is now officially practical.

And considering how much some companies are likely to spend on RFID over the next few years, cheap is a very attractive price.

Face it: Right now RFID is probably a mystery to you and your IT staff. Oh, you may have read a few articles on RFID. You may even have seen demonstrations. But for all you know, the articles are wrong and the demos are rigged.

Unless you're already hip-deep in an RFID implementation — because Wal-Mart or Target or Albertsons or the Defense Department has set a 2005 deadline for you to put RFID tags on every pallet and carton you ship their way — you and your people don't know RFID.

And you should. You know that. If you make or move any kind of product, eventually you'll need to start building some RFID expertise. But there's only one way to do that: Put RFID technology in the hands of your IT staff and let them kick it around.

But usually there's a nasty trade-off. If you bring in a technology early in its life cycle, your staff gets the maximum exposure and the most time to figure it out. Unfortunately, early on is when any new technology is likely to be most expensive.

You can wait until the price comes down. But then you could find yourself racing to meet a mandate that customers or your CEO has set for getting that technology up and running — and making all your early mistakes against a hard deadline. That gets expensive, too.

But right now, there's a sweet spot for RFID. You've still got time and RFID starter technology has gotten cheap.

Right now you can buy RFID evaluation kits from companies like SkyeTek Inc. in Boulder, Colo., and RFID Inc. in Aurora, Colo. For \$750 or less, you get an RFID reader, sample RFID tags, software — pretty much everything your techies need to start getting comfortable with this stuff.

No, it's not enough to do a pilot project. Think of this as the prepilot stage, when your staff can try out RFID, experiment with it, kick the tires and get a real gut-level sense of how it works and what it can do.

And you can most likely pay for it all out of petty cash.

Of course, those RFID products at CeBIT are a sign of what's to come. By the end of the year, we'll be awash in RFID-enabled devices. Wait another six months and you'll see RFID reaching all the way down into consumer products—cell phones, handhelds computers, plug-and-play PC peripherals. Ordinary people, or at least tech-savvy hobbyists, will be making and scanning their own RFID tags. The sweet spot will have gotten sweeter.

But if you wait, you've lost that head start. You've lost something else, too. For the past few years, the people in your IT department have been grinding away. The hours have been long, the layoffs have been depressing, and,

with no money for new projects in the budget, the technology hasn't exactly been exciting.

Now you've got an opportunity to remind them that there's a future for them in your IT shop. A future with challenging technology. A future that will require honing old skills and developing new ones. A future you want them to get ready for.

Don't waste that opportunity.

Quit worrying about RFID and start doing something about it now — on the cheap.

• 45552



world's senior news columnist, has covered IT for more than 20 years. Contact him at frank hayes@computerworld.com.

Better Safe Than Sorry, Right?

Virus invades the network at this real estate agency's main site, so IT consultant pilot fish advises disconnecting the agency's remote office. Fish cleans up main office, then heads for the other site – and finds a baffled staff. "We got the message to disconnect, but we didn't know exactly what to disconnect, so we disconnected everything," office manager says. And it takes fish all night to reconnect every network cable, mouse, keyboard, monitor and power cord.

Aha!
Nurse at this state hospital tells support pilot fish that

pilot fish that she's getting a strange error message on her PC. Fish immediately diagnoses the problem: "it's the monitor's 'no signal' message," he tells the nurse. "All you have to do is turn the computer on." "You mean the box thingy that sits on the floor?" she replies. "You guys took that away yesterday to fix some other problem."

Just Trying to Cooperate

User says his PC is acting strangely, closing some applications and opening others on its own. Support pilot fish can't detect a virus or any other problem with the PC, despite returning to the user's desk saveral times. But user keeps complaining about it. "I was in early one morning, so I went to check that PC before anyone arrived," says fish. "To my surprise, I found refrigerator magnets stuck all over the machine. When confronted, the user said he took them off when I came down because I had told others not to put magnets on their PCs."

Hey, Help Is Help Temp claims she's well versed in PC

use, but she calls this IT help desk pilot fish every half hour for three weeks. Turns out she's not good at doing anything else either, and soon she's gone. Four months later, fish's phone rings with a caller asking questions about software that fish's company doesn't even use. "It was the temp," groans fish. "She was now temping at a local university, but she called the one number she knew could help her."

And Thanks for **Your Support** CIO tasks pilot fish with doing risk assessment on a major project, and fish determines the biggest risks: The project sponsor is ineffective, and the project manager is worse. "Big problem: The sponsor is the CIO, and the PM is his contractually employed buddy," fish says. Fish's report gets buried. Project runs late and \$1.5 million over budget. And in fish's next evaluation, CIO writes, "I wonder sometimes if you have the backbone required for your job."

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